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SCHOOL OF EDUCATION

THESIS

MOTIVATION IN THE UPPER GRADES

Submitted by
Mary Olive Nolan

B. S. in Ed., Boston University 1928

In partial fulfillment of requirements for the
degree of Master of Education.

1 9 3 0

FOREWORD.

The public today is demanding that our schools fit our pupils for their every day work in the world. Education is no longer a luxury; but is a necessity. Therefore, our training must be practical. Hermits and isolated facts have little place in this work-a-day world; people live, work, and play together, while facts and ideas merge together and are useful in pursuit of a definite goal. Correlated, not isolated, work is the aim of most modern educators.

The following pages give an account of my attempt to work out in actual schoolroom practice my theories regarding correlation. I am indebted to friends and co-workers for help and encouragement in this work, and to broad-minded, sympathetic superiors, whose loyal support and understanding allowed me the freedom to put my ideas into practice.

Part of this work was done in the congested city districts of South Boston and Roxbury, part in the Savin Hill residential section of the city, and some in the distinctly suburban town of South Weymouth. Some children were poor, some well-to-do; some were bright, and some were not; some were American born, while many were not; but correlation appealed as strongly in one section as in another and to one type of child as to another. Parents as well as children

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have seemed to sense the practical value of correlated work.

By no means do we advocate correlation as a panacea for all educational ills. In fact, we doubt if there is any universal cure, but we do know from experience that correlated work is usually thorough work and therefore, worth while. Therefore we have taken as our watch word, that one which America's discoverer gave to this New World,- "On".

have shown to agree the practical value of correlation work.

By no means do we advocate correlation as a

method for all educational life. In fact, we doubt if there

is any individual one, but as to how from experience that

correlation work is usually carried out and reported, we can

write. Therefore we have taken as our motto, that one

with another, "Education is a life long process."

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CHAPTER I.

THE SIGNIFICANCE OF CORRELATION.

A. FUNCTIONS

"A little child shall lead them." Anyone who has taught the little ones when they first come to school must realize that they do not separate thought from action or one subject from another. They seem naturally to associate number work with reading or drawing and to carry the interest of one subject into the next.

Immediately, we (How we have sinned!) proceed to make the learning process regular, uniform, systematic and generally unnatural by separating each subject from the other and by erecting little mental fences to keep them separate. We have not rested until we made the separation more complete in the upper grades by having departmental work in the hands of specialists in each subject, until our pupils even think in blocks (if at all) and lose the power of correlated thinking and of sensing relationships between known facts.

The value of correlation consists of realizing relationships and making new ones.

(1)"We are prone to separate work and thought, action and theory, practice and ethics. If we would be saved, we must follow the child's way of life. He learns from contact with the forces about him. He feels them, he sees them, he knows what they do to him. He thinks and does and discovers all in one flow of energy." Surely that is a picture of correlation of all a child's powers.

Social evolution has shown us that life is not, and never was, separated into little compartments. All through the history of the human race, we can trace events leading to others and influencing others, from these, in turn, we have resultant events with overlappings and interweavings everywhere. Life is that way, and so is all natural learning.

There is a type of pupil to whom the mere acquisition of book facts is interesting. However, the ordinary boy who will so soon grow into the type of man that will make up the bulk of our good citizens of tomorrow, needs something more potent to awaken his interest and spur his latent ability. Such a boy (or girl) needs many contacts beside a printed page in his training. He sees and feels through his

(1) Angelo Patri - Schoolmaster of a Great City, p. 216.

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hands, and only by using them, as well as his mind, his ears and his eyes does he live his school life to the full. This condition is not confined to children. If it were, we would not see so many "Do not handle" signs in stores. It seems to be a natural human impulse but is more marked in children because they are prone to be natural.

Disconnected subjects may interest some of them for a while, superfinally, but lessons must be related or correlated to be of the highest value.

We have been hearing much about "Educating all the children of all the people" and most educational systems have expanded in an effort to do this; still, boys and girls by thousands continue to leave school at the age of fourteen or sixteen years because the schools do not meet their needs. Schoolroom and life have not been correlated as they should have been.

(2) "The fundamental difficulty in school work is that the work in which the schools seek to engage the child is not significant to him. It does not answer any questions which his experiences have raised in his mind."

(2) Wilson - Motivation of School Work, p. 10.

...the only of his kind, as well as his kind, his kind
and his kind that his kind life to his kind. It is
condition is not confined to children. If it were, we would
not see so many "Do not handle" signs in stores. It seems to
be a natural human reaction that is first marked in children
and then they are grown to be adults.

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condition is not confined to children. If it were, we would
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be a natural human reaction that is first marked in children
and then they are grown to be adults.

The work is foreign, external and detached instead of being vitally related to his interests. New facts are filed in mental pigeonholes and forgotten, because they are not associated with known facts. Very often there is no central thought permeating the entire day's work and correlating the various branches of study. When the child realizes that he uses his arithmetic not only for measuring and making change, but in his geography calculations, in history problems dealing with dates and distances, in his music, his drawing and his shopwork, as he does in well correlated work, he begins to respect arithmetic as a very valuable tool and no longer considers it a trap in which the teacher catches, sooner or later, every unwary pupil, and sometimes even those who are wary. His attitude toward a subject changes when he feels that he needs it. It means something to him more than a mark on his report card.

The best thinkers on the subject believe that every day should see a wane of the old super-imposed unrelated lessons and a rise of self-activity and correlated work.

B. LIMITATIONS

Enthusiasts whose heads were in the clouds and whose feet were not on the earth, have sometimes carried the idea of correlation to an absurdity. The great Herbart believed so strongly in correlation that he advised correlating everything.

The work is foreign, national and domestic interest

of being directly related to his interests. His interests

find in actual experience and forgotten, because they are

not connected with actual facts. Very often again is no

general knowledge of the facts and the facts are not

the same as the facts in the past. The only thing that is

not the same as the facts in the past is the fact that

the facts are not the same as the facts in the past.

With these facts in mind, in his mind, his mind is

the same as the facts in the past, in his mind, his mind is

the same as the facts in the past, in his mind, his mind is

it is a fact in which the facts are not the same as the facts

in the past, in his mind, his mind is the same as the facts

in the past, in his mind, his mind is the same as the facts

in the past, in his mind, his mind is the same as the facts

The first sentence in the subject matter, that every day

should be a new one, and the old one should be replaced by a new one

and the old one should be replaced by a new one.

Conclusion

Conclusion: The facts are not the same as the facts in the past

and the facts are not the same as the facts in the past.

The facts are not the same as the facts in the past.

The facts are not the same as the facts in the past.

This, of course, could not be done and that error really injured the cause temporarily. Dragged in correlation is of very doubtful value. Those who try to connect very distantly related facts are forcing a kinship which is unnatural, and the result is pitiful.

(3) Judd warns against wanderings and trivialities in work and urges teachers to keep to one main line of interest at a time and to cluster examples around that main line, never for a moment allowing the chief consideration to be lost from sight.

(4) "Wide correlations may be brought about by seizing the opportunity to connect subjects which have interesting relations with each other." It is not possible to correlate everything all the time. Neither is it desirable to do so.

History, geography, economics, and civics have so much in common and are so interdependent that there is natural correlation. Mathematics, mechanical drawing, and manual training have a healthy relationship. Hygiene, chemistry, and cooking easily merge into big units of work, while literature correlates now with history, again with grammar or often with vocational guidance. The keen and alert teacher will see and

(3) Judd - Psychology for Teachers, p. 289.

(4) Davis - The Technique of Teaching, p. 12.

... of course, people are not that easily
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... very much value. These are to be connected very closely
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... is essential.

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use the countless ever recurring opportunities for correlation but will never try to create artificial ones. That is deadening. In fact, the people who are guilty of that mistake are the very ones who are responsible for the resentment of the specialists to any seeming intrusion upon their subjects. Any attempt to correlate everything with everything else results in confusion, and further intrenches the specialist behind his fortification of suspicion. (5) However, even the specialist must cope with the psychological demands of the pupil as well as with the logical demands of the subject, and even he must realize that the results of instruction and drill are tested by use in the correlated subjects of the curriculum. (6) Arithmetic may be needed in composition, geography is needed in history, and spelling and grammar in all subjects requiring written work. Such testing is frequently most reliable since it is based upon the pupil's ability to use his capital when a situation demands it.

While all this is true, the fact remains that the acid test of common sense must be used here, as everywhere else in our teaching. We want to realize that correlation, like everything else in life, has its limits.

(5) Adams - Modern Developments in Educational Practice. P336

(6) Davis - The Technique of Teaching. P30

C. PSYCHOLOGICAL SOUNDNESS

We are well acquainted with the fact that interest must be a factor of good learning. Certainly, the greater the number of interests from which we draw, the better the learning. The more stimuli the brain receives, the stronger the contact. The more varied a person's interests are, the broader he grows. Our senses were given us in order that we might have more avenues by which impressions might reach us, and more methods of acquiring experiences; so, by using all points of contact, and tying them up with reason and thought, we build firmer foundations, have wider experiences and acquire more urges to carry on. Since the association of ideas is a great aid to memory, a pupil does not readily forget correlated facts for the very reason that he was interested while learning them and was linking them with so many other facts during the learning. That, surely, is natural and wholesome education.

SUMMARY

We have endeavored to show that correlated work, not separated blocks of work, is the child's natural method of learning. We believe that the drawing together of many interests strengthens each, as they grow toward a common cause.

We find that Judd and Davis are our authorities on this subject and that they warn against carrying the idea to extremes. We found in our work that we had to keep to a main line of interest and that we should not try to relate thoughts or studies that had no natural relation to one another.

Our work had a good psychological basis in that the association of ideas aids memory and in that we strengthen all senses by use.

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CHAPTER II.

CORRELATION OF THE SOCIAL SCIENCES.

We think of geography, history, civics, economics and sociology as the social sciences. Is it possible to teach one of these subjects independently of any of the others? I contend that it is not, if they are taught properly. History has always been influenced by geography. We have social geography and economic geography; also economic history. Civics and history have been closely allied always. In fact, geography and history are valuable only as they tell the story of the earth as the home of man and of man's progress through the ages.

There has been such an impetus given to the correlation of the social sciences the past decade that the subject seemed to gather an unnatural momentum. As a result, we have "scrambled courses" of study, and curricula full of material that might well be omitted.

The social studies, like the rest of the curriculum, are undergoing a great change. At present, they seem less settled than the rest. The very nature of them would account for this. History is always being made, civic life is constantly changing and so is economic geography. It is not

as easy to plan curricula for geography, history and civics as it is for spelling and arithmetic - tool subjects.

So much has been said and written about fusion courses in the social sciences, pro and con, that probably there are few teachers who have not a decided opinion on the matter at present.

Courses of study should have definite objectives and should fulfil these objectives. Of the forty-three courses which I have reviewed, only three approach that criterion.

It has been made clear to teachers that objectives, to be valid, must be specific, also that a sane and sensible way to arrive at those objectives, is to find the civic shortages or needs of people today, then base our objectives on those shortages, in order to correct them. Snedden has written very much to the point on civic shortages.

Denver, Colorado; Los Angeles, California; St. Louis, Missouri; and Dayton, Ohio, have much talked of courses in the social studies. All have good qualities, but all are overloaded. Most of them seem to declare formal objectives and then forget them. Of them all, the Dayton, Ohio course is the most outstanding. That shows a very careful analysis of the subjects and a worth while fusing.

Everyone agrees that we need to change our antiquated methods of teaching the social sciences, but few offer practicable suggestions for doing it. Even the keenest thinkers on the subject admit to being in a state of indecision and doubt as to the proper methods of selecting the materials and of teaching them.

"To fuse or not to fuse" has been, and still is, a burning issue in many pedagogical circles. Some of the most ardent advocates of a few years ago seem less vociferous now in the praises of fusion courses, for the simple reason that no satisfactory one has been offered. On the other hand, some who were won over to the cause rather late, with the zeal that characterizes a convert, are clamoring for a real fusion course.

Hatch, Rugg, Marshall and other experts have made great strides forward in this direction, but their courses, when tried out, have not met with the hoped-for success.

Hatch is very strong on method, Marshall has come nearest to the real fusion course, and Rugg's courses are rich in suggestion. None of them seem to have reached the goal of a real workable fusion course. Marshall's is nearest to it, but, while well fused, it lacks interest and appeal to children. From a scholastic standpoint it is splendid. Rugg's pamphlets contain some glaring inaccuracies but a revision of the course could eliminate them easily. It is not a fused course in the true sense. Some pamphlets are decidedly geography, some

history, some civics and some economics, one even, is sociology. To be sure, each pamphlet has a smattering of one or more of the social studies. They are valuable desk books but have to be adapted to class needs. They certainly are inspirational.

Curriculum makers seem to fail on one point, i.e., that of crowding too much into the course. Experts see so much material that can contribute toward their aims that they tend to use it all, therefore neglecting to stress a few high lights. Too much is swallowed and too little digested.

No doubt, one reason for the slow growth of the social sciences (rather than geography, history, civics, etc. as such) is because it is a comparatively new view point, and another reason is that there are few teachers as yet trained for the work. Instead, we have a specialist in each subject, jealously guarding that precious subject from a fusion onslaught. Until we have something better than at present in a social science course to offer them, they have a right to look askance at our so called "infringement".

However, it is all too obvious that the subject matter is their concern, not as a means to an end but as an end in itself. This means that teachers must be trained to teach the social sciences. That training can be acquired by college courses in any good school of education, by attending conferences on the subject and by reading the current literature on the subject.

Nearly every educational magazine is flooded with it. Beyond that, even, the teacher who will handle the subjects well must know boys and girls as well as subjects. (7) Such a teacher must possess these five important qualities - a philosophy of education, health, intelligence, broadmindedness, and personality. A teacher with those qualities and that training will go far in the work, once given a workable fusion course. In fact, a few such teachers might well make the course.

In speaking of courses of study for the grades of the Junior High School, we must remember that the pupils of those grades have not the experience, the judgment, the mentality nor the desire for research that "heavy" courses presuppose. They are children who need to be enthused, awakened, and led into rich fields of suggestive materials suited to their understandings and chosen for the purpose of so stimulating and training their emotions that they may develop right civic attitudes. That is a sizable job but not an impossible one. To do this, the curriculum makers should draw from economics, sociology, literature and any other available sources, including the trilogy - history, civics and geography. Surely, the hide-bound conventions anent curriculum making should no longer exist.

Paul Voelker of Columbia made a decided contribution to civic and social education in "The Functions of Ideals

(7) R.L.Packard - What Type of Person Should Teach the Social Sciences? October 1929 Education.

...every educational institution is faced with the problem of how to make the most effective use of its resources. The teacher is the key figure in this process, and his role is as important as that of the curriculum. The teacher must be able to select the material that will best meet the needs of his students, and he must be able to present it in a way that will make it meaningful to them. This is a task that requires a high degree of skill and judgment, and it is one that cannot be delegated to anyone else.

In the making of a curriculum, we must first of all consider the needs of the students. What do they need to know? What do they need to be able to do? These are the questions that must be asked at the very beginning of the process. Once we have determined the needs of the students, we can then begin to select the material that will best meet those needs. This is a process that requires a high degree of skill and judgment, and it is one that cannot be delegated to anyone else. The teacher must be able to select the material that will best meet the needs of his students, and he must be able to present it in a way that will make it meaningful to them. This is a task that requires a high degree of skill and judgment, and it is one that cannot be delegated to anyone else.

Paul Folger of the University of Chicago has written a book on the subject of curriculum making. He argues that the curriculum should be made by the teachers themselves, and not by a central authority. He believes that the teachers are the ones who know best what their students need, and he believes that they should be given the power to make the curriculum for themselves. This is a view that is shared by many other educators, and it is one that is worth considering.

and Attitudes in Social Education." The Twenty-Second Yearbook of the National Society for the Study of Education" has an inventory and evaluation of the "pioneer" movements in curriculum making in the social studies. It contains several plans for re-organizing those studies. The Fifth Yearbook of the Department of Superintendence contains many excellent studies of different social science problems in Junior High School work.

In fact, so much has been written and so much more said about the social studies that one has to think clearly or become engulfed in the many conflicting opinions. It is a hopeful sign. Acquiescence makes for stagnation rather than for progress. The very fact that the matter is being aired leads one to believe that people are thinking about it. The more real thinking educators do before planning courses of study, the better the courses are bound to be.

Judd, Marshall and Hatch have done fine work along these lines. They have flung a challenge into the social studies circle. Some of the keenest men in the work are delving into the matter, unwilling to answer that challenge until they are better prepared. Teachers are awaiting a first class course in the social sciences. Probably it will be a unit course, having manifold choices, geared to individual differences. The time seems ripe for such a course.

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Yours,

Much of our curriculum has latent civic values and as soon as teachers relegate cultural education to its proper place (and it has a large one) their vision will be less obscured for advancing toward the goal of civic education.

The social teaching of the cultural subjects can be tremendously valuable toward civic education and international good-will. The teaching of Spanish may aid the (8) pupil to become acquainted with the literature of another nation, the ideals of those people, their heroes, and their contribution to civilization. It should open his eyes to the fact that modern civilization is the result of the participation of all nations and should make him tolerant of foreigners who speak English imperfectly or with an accent. Oh, many courses should be offered to our boys and girls and, in all, there should be great elasticity. However, with all these courses and with a perfect social science outline, we must have teachers trained for it and in sympathy with it or all civic values will be destroyed. Teachers must be trained in just such a way as we hope to train children - understanding, appreciation, right attitudes and habits.

The recounting of specific "try-outs" in correlating the social sciences will, no doubt, be of more value than

(8) J. F. Santel - The Civic Value of Spanish in High School. Education September 1929.

theorizing about it. The following units of work were carried on in a Junior High School.

CORRELATION OF GEOGRAPHY, HISTORY, CIVICS,
ECONOMICS AND SOCIOLOGY.

This is not an attempt at an outline of correlation between any two subjects, but merely an account of the many instances of close correlation that my boys and I found at every turn in our work. We started off with certain ideas of correlation in mind and then found new ones at every turn.

To be sure, our correlation went back one more step, that is, to our shop activities which motivate our academic work. My plea for correlation is that we should teach nothing "in a vacuum" but closely correlated to life, the lives of the pupils. One of our big units of work was on copper. We needed to study about copper because the boys were using so much of it in the electrical shop. These boys may have been in especially close touch with copper, one of the most necessary materials for electrical work, such as telephones, radios, bells, and wiring of all kinds, but there is scarcely a person in our country today who is not interested in some degree in all these things. Surely there is not a boy! With these many needs in view, we started on our work.

the following units of work were carried
on in a fairly short time.

UNIT OF WORK FOR THE FIRST TERM
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COPPER

Work on copper was an ideal eighth grade study as it gave an opportunity for a comprehensive review and for much clear thinking. We were most fortunate in having a nugget of copper from the Calumet and Hecla mines and many views of Calumet, Hancock, and Houghton, Michigan. As always, the specimen and views were of vital importance to the boys. They were something real - not out of a book. Therefore, we studied the Great Lake Region first. Immediately we were reminded of French colonization here.

FRENCH INFLUENCE ON UNITED STATES HISTORY

It was impossible to study this region without realizing that France had played a part in its early history. The ubiquitous French names and the picture of an occasional ruin of a French fort spoke of Jobet, Marquette, La Salle and of French traders of the later period. The class admitted a hazy knowledge of these explorers and of a Colonial War with the French and Indians and were glad to refer to history books in geography class time in order to "look them up and get them right."

Bold explorers, hardy woodsmen, and hardy missionaries were these Frenchmen; and the boys better appreciated their part in our history as a result of this brief review at a different perspective. We dared go further and compared the

NOTES

There is a great deal of material in this book which is of great value to the student of the history of the United States. The book is written in a clear and concise style, and the material is presented in a logical and systematic manner. The book is a valuable addition to the library of any student of the history of the United States.

THE HISTORY OF THE UNITED STATES

The history of the United States is a story of the growth of a great nation from a small colony to a world power. The story is one of the struggle for freedom and the establishment of a government of the people, by the people, and for the people. The story is one of the triumph of the American spirit over all obstacles.

The story of the United States is a story of the growth of a great nation from a small colony to a world power. The story is one of the struggle for freedom and the establishment of a government of the people, by the people, and for the people. The story is one of the triumph of the American spirit over all obstacles.

rude, crude, methods of living of these French pioneers with the almost squalid mode of living of so many dark-eyed Pierre's and Nannettes today in our great mill cities of Rochester, Fall River, and Pawtucket. These people are on the industrial frontier now. This brought us to a realization of the contribution which people of other nations have made and are making now to America.

CITIZENSHIP

While this may be neither history nor geography, civics, sociology or economics, I believe that it is worth while to develop that state of open-mindedness and real tolerance. The French have contributed in many ways to American history and American life. Give due credit to them, who, with their Gallic gayety of spirit, with hearts brave but light, faced danger and hardship in forest and on mighty waterways against savage Indians and wild beasts! Give due praise also to these modern French Canadian mill workers who make good citizens. Surely, the school can do much to stop the slur of "Canuck", "Frog" and similar epithets. Wherever one finds an opening in history or geography to stress that real, true, democratic American ideal of neighbors and brothers, it is wise to do it. Let us link our history with that of other lands, whenever possible. Surely it is linked closely with French history.

FRENCH AND AMERICAN HISTORY

Many of the cities mentioned had monuments of the gallant Lafayette, so we reviewed the part that he and France played in coming to our aid in those dark days of the Revolution. Our boys were old enough to understand some of the international politics there on the part of the French government, i.e., one blow for America meant two against its enemy, England. Some one immediately asked why we did not, in turn, help France a few years later, in one of its revolutions, when it sought our aid. I did not have to urge them to look up Washington's policy. They reported, unasked, the next day and felt an added respect for the wisdom of those statesmen who realized that America was too young, too weak, and too poor to be of any substantial aid, and realized, too that it would ruin our country.

The general idea of the class was that America responded gloriously with men and money in those dire days of 1917 when bleeding France with her back to the wall, sent her clarion call to us for aid, and that General Pershing, with the entire American army, one million strong, at his back, paid in teeming measure our debt to France, as he, with his hand on the tomb of that gallant French soldier said, "We are here, Lafayette." That was a "psychological drive" but a good one. Should I have wrecked that picture by a discussion of all

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the sordid issues at stake? I do not know. I did not do so. We are too close to that war and too many boys lost loved ones, so I let the ideal stand. Later, they will be better able to understand the other side.

By no means, was all our history confined to the French. We had pictures of the Cobor Copper Works at New South Wales, Australia, showing that, in a nearly antipodal land, the people were smelting copper in much the same way as they do in our own country. Why such a seven league jump? The boys brought in the pictures; they vivified their work and especially helped to impress on them that "all men are brothers." We live in a wonderful world; this world which is the home of man. When we think of it in this way, we make geography vitally interesting.

GEOGRAPHY

Coming back to the copper-laden wharves at Houghton, Michigan, the boys asked, "Why is it shipped away?" Because the demand for it is in New York, Chicago, and other large manufacturing centers. "Why is it not manufactured there?" Because this is a mining and refining region. The copper is mined in nearly pure metallic form, crushed and washed at the mines, refined near by, and then shipped to those centers needing it for their mills and factories. Thus each section seems to have its own work to do.

A survey of the regions of Montana, Arizona and Colorado came next, with emphasis placed on the demand for copper in the Pacific coast states and for Oriental shipping.

Our geographical readers furnished much valuable information about copper smelting and refining. They were interested in comparing Butte, Anaconda, and Tucson with their own and other eastern cities.

We reviewed the copper regions of Canada, Mexico and South America and found those of Europe, Asia, Africa, and Australia. Maps were drawn and colored and routes traced in their study, while every day something new came up. One topic which kept coming up was the tariff; so, we studied about tariffs.

TARIFF

Here again, history was closely allied with geography when tariffs loomed before them, and for once, really meant something to a class. In our study of the copper trade, we found that there is no tax on copper imported into the United States so long as it is "fit only for manufacture." Questioning and reading soon brought out the need of tariff - so our history lessons on the origin and development of tariff acts, which was

such a vague subject to many of us in our school days, became of live interest to these boys, so soon to become men and voters. I believe that they need that knowledge and an understanding of the need of protecting our industries, but only so far as it is just to people of all sections. A little politics? Yes, public affairs.

From copper to Alexander Hamilton surely seems a far cry, but the class could not study tariffs without learning much of Alexander Hamilton. Their histories had dealt briefly with this man. His was a master mind and it was well worth the time of this class to learn how much our government owes of its firm financial standing to Hamilton's keen insight and excellent judgment.

The ever widening difference of opinion between southern planters and northern manufacturers on the tariff question gave them a little clearer conception of the causes of events leading up to the Civil War. The "Tariff of Abominations" and the resultant "Nullification Act" showed very plainly this sectional feeling. A brief study of the McKinley Tariff, the Wilson Act and the Dingley Act made very clear to them the widely divergent opinions of the two large political parties of the United States. We felt that we did our duty by tariffs for the time being.

While the electrical shop gave us many leads in our work, the machine shop bore its full share, too

TOOL MAKING

Vocational guidance experts would have us teach all history through the history of occupations and inventions. Most of us would weave that into our history, instead. It is certainly good, in moderation.

While making tools, our boys found a wealth of history and geography connected with the various tools.

ECONOMIC HISTORY AND GEOGRAPHY

While our boys were making hammers, they traced the evolution of the hammer from pre-historic times to 1929. We entered upon it because the boys began to wonder "how folks pounded before they had hammers." The history of the hammer was influenced greatly by the geography of the countries, their resources and their people. The cave men had no knowledge of metals; their hammer was, first a stone, then a stone with a rude handle. Later, copper was used through the early historic years, until finally civilized man learned to smelt iron, so we had iron hammers, and so on down to the fine, polished steel tool of today.

While the electrical field was on, the subject was

and the subject was able to fall asleep.

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Someone brought in a large picture of various tools found in excavated Pompeii.

ITALY

We studied Italy right then and there - that is, as much of it as was necessary to satisfy them until we were ready for a more thorough study. However, that seemed the time to study the region around Mt. Vesuvius and Naples. I believe that, by our study of Italy when they wanted to know about it, they learned more about its lack of minerals, for instance, than if we had waited for a scheduled week, as of yore; but what is far more important, I think, is that the study of that region now, as compared with the same region in 27 B.C. opened their eyes to Italy's place in history, in art, in music, and in the world; and gave them a greater respect for the Italians and a better understanding of the fine things for which Italy has for years been noted. Here was a splendid chance to stress good citizenship.

CITIZENSHIP

What of all the poor Italians huddled in cramped and unsanitary quarters of some American cities? The industrial frontier idea looms up again. What of living conditions out on

Continued from page 10

There is a very good reason.

1941

At the end of the year, the following was the result:

There is a very good reason for this.

There is a very good reason for this.

There is a very good reason for this.

There is a very good reason for this.

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There is a very good reason for this.

There is a very good reason for this.

1942

At the end of the year, the following was the result:

There is a very good reason for this.

There is a very good reason for this.

our Western frontiers in years gone by, in lumber camps, mining camps, etc.? Are these two not comparable? Whose job is it to make good citizens of our Italian boys and girls? It is ours and cannot be done by jeers of "Wop" and "Spaghetti".

When the boys made scribes in the shops, they traced the name of the tool to the Latin "scribo" - to write - and a "scribe" - a Jewish clerk. Perhaps that was English, not social science, but it was one way to teach them about other lands and other people and our relations with them, in fact, our dependence on them; and so, by dwelling just a bit on the fact that the Hebrews were scholars thousands of years ago, obviate, if possible, some of that all too prevalent racial bigotry. Mayhap that is civics or history or geography. What does it matter? Should not they correlate? I believe that they should. Everywhere we saw evidences of the influence of geography on history.

GEOGRAPHICAL INFLUENCE ON HISTORY

At Christmas, the boys in this shop made nut crackers and picks, and so, for a while, we studied nuts. Most of that was geography, but, in our study of the irrigated nut-growing regions of California, we found a statement to the effect that California's wealth lay in its soil, not under it, as the "Forty-niners had thought." "Did many of the 'forty-niners' get rich?" and "Was the 'Covered Wagon' true?" were some of the

questions the boys asked. We opened our histories and reviewed "The Gold Rush to California" in all its phases; leading them to see a little beyond, and to realize how its suddenly increased population made it seek admittance so soon to the Union and the effect that had on the balance of power in the senate at that critical time. We went still further and discussed the direct effect this settlement had on our railroads.

Another class and another teacher might have found very different possibilities on this same subject, but these developed naturally, day by day.

The boys had frequently spoken of the cotton waste that they used constantly in the shop and since it was a commodity to be studied, we turned to it when a new boy said, "I thought cotton waste meant cotton seeds." Here, again, geography featured largely, but "Cotton is King", "Cotton meant slaves and slaves meant the Civil War", and similar statements were challenged. Surely, the fact that white men were unwilling to endure the heat and the work of the fields while the black men could, was a geographic and sociological influence on the history of our country. "Why did the invention of the cotton-gin fasten slavery on the country?" was another question to be answered. The answer is along economic and industrial lines, of course. The fact that the seeds could then be picked out quickly by machine, encouraged the planters to extend their land and to grow much larger crops, knowing that it could be ginned readily, and hence,

marketed. The fact that the South prospers today without slave labor is a problem in economics and sociology, we are told, but a little applied common sense shows that the South has grown and conditions have changed materially. Slavery was wrong. The new South is changed, and for the better. The production and marketing of crops naturally led us to the study of commerce.

COMMERCE

It is scarcely possible to study cotton without studying wool. Hence, to take up the subject in a little more advanced way and to give them a new angle of thought, we stressed England's monopoly of Australia's and New Zealand's wool, and the struggle for supremacy in Argentina between English and German wool interests.

The study of the wool regions of our Western States and the subsequent manufacture of that wool here in New England, and likewise here the manufacture of southern produced cotton explained in a measure the ever recurring tariff conflict in our country.

One teacher said, "No one but statesmen understand tariffs." Just because that has been sadly true in the past, tariffs have often been most unfair to many people. It is time

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we did understand these things.

Because the study of one fabric leads to another and because a silk and linen shade had been made for a wrought iron lamp that the boys made in the shop, we did a little history and geography work on silk and linen. It was mostly informational, as the fact that the ancient Egyptians manufactured linen and the Chinese first made silk, side lights, as it were, on civilization.

TRAINING FOR DEMOCRACY AT ITS BEST

Silk and linen may seem far removed from boys in a shop in a Junior High School - but they will be in the melting pot of tomorrow's democracy and that tomorrow will have to face and decide many perplexing questions concerning tariffs and capital and labor and the like. Knowledge, judgment and tolerance, as well as an appreciation of the fine and the beautiful in life will be needed. Surely this is the time to make beginnings along those lines.

RUBBER

The following is an account of a unit of work on rubber, which correlated the social studies. We started this work from a standpoint of the uses of rubber, and like a snow-ball, it rolled up into a study of "World Production and Consumption of Rubber."

Because the study of the history of the United States is a study of the history of the world, it is a study of the history of the human race. It is a study of the history of the human race, and it is a study of the history of the human race. It is a study of the history of the human race, and it is a study of the history of the human race. It is a study of the history of the human race, and it is a study of the history of the human race.

THE HISTORY OF THE UNITED STATES

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USES OF RUBBER

The class discovered that fifty years ago the uses of rubber were few, but now the civilized world depends on rubber for its comfort, its health, its safety, its necessities and its luxuries. There is scarcely an industry that does not use rubber products of some kind. Pneumatic reveting machines for construction work; valves for dynamos; hose for fires; derricks for mines, quarries and oil fields; and belts for machinery in mills and factories, are all dependent on rubber.

No less important are rubber coats, shoes and hats for all people obliged to brave stormy weather; rubber sheets, mattresses, gloves, ice bags, hot-water bags and pillows for the sick room; parts of washing machines, vacuum cleaners, bath room equipment and fruit jar rings for the home; type-writer parts, stamps, erasers, bands and elevator parts for the office; hard rubber for radios and telephones, insulation for electric wires everywhere, and above all, automobile tires. All these, especially the latter, have created an enormous demand for rubber.

While these seemed to cover every walk of life, we found that riding, that is transportation as an industry causes a huge demand for rubber. The automobile uses rubber for tires, battery cells, generators, insulation, door checks and weather strips. Trains use rubber for steam hose, insula-

tion, lighting belts and air brakes. Insulation, some flooring, plumbing, valves and safety appliances on ocean liners require much rubber. Airplanes use rubber for wings, tires, inflated boats for forced landings and for rubber hose covering of copper tubes.

IMPORTANCE OF RUBBER

Rubber is distinctly an American product, despite its successful transplanting elsewhere; rubber manufacture is largely American; American airmen are quite to the front with "Lindy" leading; advertising is a great American trait; so it seemed most appropriate for an issue of a Rubber Magazine to feature a picture of Colonel Charles Lindberg and his airplane with this caption:

"Rubber Insured Lindy's Safety."

Then came in smaller type this explanation: "Gasoline and oil feed lines were encased in soft, elastic tubing to absorb dangerous vibration. Other rubber accessories, in addition to Silvertown tires, were landing gear shock absorbers, and an inflatable rubber aircraft." As "Lindy" is such a hero to the boys, they were delighted with this advertising. It gave us a chance to stress not only the world need of rubber, but the splendid qualities of this popular young American and the probably international effect of his great flight to Europe and his flights to Mexico and Central America. We emphasized

tion, it will collect and its storage. Installation, some flooring
plumbing, wiring and safety appliances on wooden frame supports
each window. Appliances are placed on the wings, wire, installed
units for forced ventilation and the rubber hose covering of
copper pipes.

Installation of Windows

Work is distributed as follows: window, handle
the mechanical details of the window; rubber weatherstrips
is laid in position; asbestos paper is laid on the frame
with "linoleum" coating; weatherstrips is a small asbestos strip;
no is removed and replaced for an insulating rubber
material is located in vicinity of window handle opening and
the window with this opening.

"Rubber Insulated Linoleum" a safety.

Then work is carried out in this explanation: "Linoleum and oil
leaf lined with asbestos in wall, electric wiring is secured
through a window. When a proper connection, in addition to
electrical wire, wire landing, and small electrical, and an
insulating rubber material." as "linoleum" is given a word of the
work, when work begins with this explanation. It gives a
change in order not only the work done at present, but the
relationship of the window to the window frame and the
necessary installation of the window frame to the frame
and the use of the rubber and electrical wiring.

not only our manufacture and consumption of rubber, but also our dependence on other people and other lands for the raw rubber to manufacture.

Far sighted men realized some years ago that more rubber was needed than could be produced from the Brazilian forests under existing circumstances, so other rubber regions were sought.

RUBBER REGIONS

Rubber will grow wherever there is a very warm, moist climate not frequented by high winds. That means, of course, the tropics. The boys knew enough geography to answer that correctly the first time. In some of the advertising booklets, they found pictures of a rubber belt around the earth, thirty degrees each side of the equator. The bulk of the best rubber grows in an inner belt about ten degrees north and ten south of the equator. That inner belt includes the plantations of Malay and the Dutch East Indies and the wild rubber forests of Brazil.

BRAZIL

Here we have economics as well as geography. For years, Brazil was the greatest source of rubber. Valuable

rubber trees grow wild in the forests of Brazil along the banks of the Amazon river. Of course, there was place geography here, too, as all places mentioned were located on maps. This Brazilian rubber is commonly known as Para, after the town of Para from which large quantities were, and still are, exported yearly. The Brazilian rubber forests are located from eight hundred to twelve hundred miles from the mouth of the Amazon river, in a dense tropical jungle where rubber gathering is a dangerous business. Few white men care to live in this tropical climate; native labor is limited, unskilled and difficult to obtain; transportation is, at all times, a problem; all of which greatly reduces the actual output of Brazil's immense rubber potentiality. It was a new view point to these boys to realize that labor was difficult to obtain. It was such a contrast to the condition of unemployment with which they were familiar. That there could be a lack of transportation was also a new thought to these city boys.

Further study showed them that the rubber trees are scattered among many other kinds in the forests, and the rubber gatherer must hack his way through miles of dense jungle to find the trees. The river is the only highway - so the sap can be gathered only from the trees near the river, since the gatherer must return each night to his camp. Another disadvantage is that the Amazon country has a rainy season which lasts half the year, thus hindering the rubber output, as much of the jungle is actually flooded for months. They read of the loneliness and

dangers of life in the jungle as the men are compelled to work far from their families and friends, in constant danger of wild beasts, reptiles and fevers. This gave us a chance for a little vocational education as well as a little sociology. They were surprised to find that it was no shortage of rubber supply that caused the transfer of the world's rubber sources; rather it was these unfavorable conditions of lack of skilled labor, unhealthful living conditions, and distance from parts. More economic geography. You see, nature was aided by science in the person of Mr. Wickham.

WICKHAM'S EXPERIMENT

There is botany as well as geography here. We appreciate the scientific mind as well as the persistence of the man's character, too. It was a coincidence that coffee became a staple product of Brazil at about the time that the rubber trade shifted to the Middle East. To be sure, it was the ruination of the coffee crop of India by a blight that spurred on the scientific investigations and experiments with rubber in the East. Wickham believed that rubber could be made to take the place economically of the blighted coffee crop there. He also saw that there were difficulties that would prevent the wild crop of Brazil from keeping pace with the growing demand. It was very good for the boys to learn these many facts and to realize that scientists are always experimenting and that

business men have to look far ahead for raw products and for markets. That is commercial geography.

Wickham got his idea of planting rubber trees in India at about the same time that men in America began to experiment with the automobile. Mechanical experts claim that automobiles never could have become the swift, comfortable vehicles of today without pneumatic tires. Brazil, under present circumstances never could have hoped to supply the demand of the automobile industry, but the Far East plantations were ready, and Wickham's experiment was proven a great success. He took the seeds from Brazil (under great difficulties, the boys discovered) to the Botanical Gardens in Kew, England. When they were partly grown, he took them to Ceylon, where he planted them in the open, in rows, with a view to convenience in topping. As the boys traced the thousands of miles of those two long journeys they began to realize what mental and physical labor, what research, what sacrifices and what devotion to a cause are required for any great project in the progress of industry and science. With this in mind, we turned our attention to the Eastern Hemisphere.

RUBBER IN THE FAR EAST

More and more, it became impressed on them that "Rome was not built in a day" and that any great, lasting piece of work takes time. It was five years before these

business can have to look for them; the two products are the
entire. That is commercial geography.

Whether at his idea of planting rubber trees in
Tahiti at about the same time that an American began to
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ings were made, and whether a experiment was given a great
impetus. He took the seeds from Brazil (which were difficult-
ly, the only discovery) to the botanical gardens in Paris.
English. When they were sent to Paris, he took them to Belgium
where he planted them in the ground in 1858, with a view to
demonstrating its utility. At the time of the demonstration of
which it was the first planting, they began to realize that
natural and artificial rubber, what was known, was established and
what was known to a certain extent for very great progress in
the progress of industry and agriculture. With this in mind, he
turned his attention to the rubber plantations.

THE RUBBER TREE

With this aim, I began to work on the fact
"There was no doubt in a fact" and that was the result, finding
about it with some time. It was the same with the same

trees could be topped, even. Then the plantations spread to Malay, Sumatia, Java and Borneo. Today rubber plantations cover an area of 3,000,000 acres with a yearly output of 360,000 tons. Figures were used for comparison, only. Twenty years ago Brazil produced practically all the rubber used in the world, while today she produces less than one-tenth. Such has been the progress of plantations!

The map study revealed these countries as the principal sources of plantation rubber: Malay, Dutch East Indies, Ceylon, India, Sarawak, French Indo China, British North Borneo, Seam and various parts of Africa. The boys located the following countries as the chief centers of wild rubber production: Brazil, Bolivia, Peru, Mexico, Central America and parts of Africa. All these countries are within the "rubber belt".

It was a surprise to these boys to discover that the British control about 80% of the rubber plantations while the United States controls only about 3%. It brought to their attention a fact that should be remembered, i.e., that one should read thoughtfully and carefully and not jump at conclusions. They had read the oft quoted statement (misleading to some people) that the United States Rubber Company owns the largest single rubber plantation in the world, which is true, but does not alter the fact that we control so little of the world's rubber supply. We hope that it may lead them to more discriminating reading.

Botany, hygiene, chemistry and government are all correlated in the study of this plantation, even though we do not so label each part. The trees there in Sumatra are laid out and cared for as carefully as those in a fruit orchard in America. They were impressed with the money and labor expended to keep the men physically and mentally fit. The company has erected good houses; provided plenty of well-cooked food, schools, hospitals, recreations and good sanitary conditions. The laborer is healthy and happy and consequently efficient. That was a good lesson in social economics.

Groups of chemists, arboriculturists and botanists are constantly studying the trees here to increase the yield and decrease tree diseases. The site has to be chosen with an eye to even temperature and rainfall, good soil and protection from wind; there has to be a steady labor supply and a convenient port. This seemed a good opportunity to stress the value of education; scientific and agricultural and especially to emphasize the splendid work being done at state agricultural schools. The boys soon realized the interest of the United States in the rubber industry.

OUR INTEREST IN RUBBER

Because the United States uses more rubber than any other country and because the British and Dutch control the world's rubber supply, which facts compel us to import an

enormous amount of raw rubber in order to carry on our manufacturing, our experts have turned to our tropical possessions as a possible source of our rubber supply.

Edison is now making experiments to aid us in obtaining a supply of rubber. The announcement that Thomas Edison believes that rubber can be made from golden-rod is met with great acclaim. Had Thomas Smith or Jones made the statement, it would have been "pooh-poohed". Forty years ago, Edison would have been ridiculed for voicing such a thought. Today, his statement is accepted. That exemplifies the power of an established reputation.

Surely, Edison has proven himself a practical scientist and he may be looked to by the public to produce quantities of this much needed commodity from that weed so long anathematized by hay-fever sufferers. When all is said and done, hay-feverites are comparatively few in number and have a short season, while rubber users are myriad and all season; so probably we shall see golden-rod farms in the near future.

So far, the United States has not been able to supply, in one year, sufficient raw rubber for one week's output of a large rubber factory such as those in Akron, Ohio. We still depend on the British rubber crop.

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Will Edison change this status? If so, he will have made one more contribution to modern life. Evidently his announcement that the weeds of our waste lands can be made to produce rubber has created a stir in scientific and industrial fields. The world awaits development.

The United States Department of Commerce has done some experimenting in the Philippines. The boys stopped here long enough to review the various members of the president's cabinet and the departments represented by them. I think that bit of civil government will remain with them as they realized how very important, in its own way, each department really is.

The interdependence of countries was well demonstrated as they learned that the United States stands today as the greatest importer of crude rubber, the greatest manufacturer of rubber, the greatest consumer of rubber and the greatest exporter of rubber goods. England and her colonies are our largest buyers of rubber goods, although we export to the whole world. The Far East leads in the production of rubber with Singapore (no longer Para) the chief rubber port of the world. All this leads to world commerce and to internationalism.

Our next step was to study the problem of transportation of rubber. Out of the jungles and from plantations, the rubber comes by small boats, on rivers, by railroad, in bullock drawn carts, on trucks and by large ocean steamers to our country. Black men, yellow men, brown men, red men and white,

111. The first thing I noticed when I stepped out of the plane was the heat. It was a relief after the cool air of the plane. The sun was shining brightly, and the air was warm. I felt a sense of freedom as I walked on the tarmac. The ground was hard and hot, but it felt good to be outside. I looked up at the sky and saw a few birds flying. It was a beautiful day, and I was happy to be here.

The United States Department of Agriculture has been working hard to improve the lives of the people in the South. They have been providing food and clothing to the poor, and they have been helping them to build up their communities. The people are grateful for what they have done, and they are looking forward to the future. The United States is a great country, and we are proud to be a part of it.

The first thing I noticed when I stepped out of the plane was the heat. It was a relief after the cool air of the plane. The sun was shining brightly, and the air was warm. I felt a sense of freedom as I walked on the tarmac. The ground was hard and hot, but it felt good to be outside. I looked up at the sky and saw a few birds flying. It was a beautiful day, and I was happy to be here.

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all have a hand in transporting this commodity. We need them all, and our rubber industry makes work for them.

Akron, Ohio is the most noted rubber manufacturing center of our country; but in and around Boston there has developed a large rubber boot and shoe industry. This lead is due to an early start, skilled labor and nearness to port.

The factories at Akron are models of modern cleanliness, sanitation and efficiency. It was good sociology for the boys to contrast the life of these factory workers with that of the gatherers in the Brazilian jungles.

As they studied further, they became increasingly aware of the fact that no industry can be isolated from others. The list of materials used in compounding and vulcanizing rubber; such as sulphur, carbon black, whiting, litharge, China clay, aniline and many others, goes to show some of the industries related to rubber. When, in addition, they considered the commodities needed to feed, clothe and shelter all the workers on rubber and its by-products, they had some idea of the immensity of the whole problem and its complexity.

Bits of industrial history are always interesting to boys, so they read about Great Britain's restriction of rubber production due to the over production in the Far East a few

all have a hand in the matter. This is the only way
all, and our common interest is the only way.

There is no one who is not interested in the
matter of the world; but in the world there are
different kinds of people and different interests. This is
the way in which the world is divided into different parts.

The world is divided into different parts of the world.
There are different kinds of people and different interests.
The world is divided into different parts of the world.

There are different kinds of people and different interests.
The world is divided into different parts of the world.
There are different kinds of people and different interests.
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The world is divided into different parts of the world.

years ago. A short trial proved the fallacy of this Stevenson plan, so, because it gave the Dutch an advantage in the rubber market, it was removed.

It was a good study in economics and business to note that the rise in price of raw rubber at that time caused a boom in rubber reclaiming in our own country. That has now grown to be a big business. The rubber business is a growing one.

FUTURE OF RUBBER

One thing is sure: We must have rubber for our many needs. There are two ways of meeting the demand, extending the cultivated areas of rubber and increasing the yield per tree. These facts are not too advanced for eighth grade boys to discover by reading and thinking. A brief review of history was effective when they read about the Firestone Company acquiring large areas for rubber planting in Liberia, Africa, that colony purchased in President Monroe's administration as a home for liberated slaves.

They began to realize the keen competition in the rubber market and there arose the eternal Why: Because, well or ill; on foot, in motors, or in trains on land; in ships on the sea; in planes in the sky; in the mines and the subways below the earth; in fair weather and in storm, to control natural forces; for health; for comfort; for safety; and for

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progress, we need rubber, and the history of economics proves without the shadow of a doubt that nature and science have always fulfilled the demands for supply; therefore the outlook for rubber is promising. The world will continue to be (as you no doubt are, after these many pages) rubber-tired.

We could recount many more of our geography - civics - history - economics - sociology units of work but, if these do not make clear our point, more would also fail. If they do, more are unnecessary.

I believe that we have, by our close correlation and interweaving of subjects we have been teaching close to life, I believe that we have made our classes feel that there is joy in living and in learning now, in 1930, more than there ever was and that it is their job to carry on without narrowness, without bigotry, without prejudice, remembering: "The true man's Fatherland must be as the blue heavens, wide and free."

J. R. Lowell.

My pupils gave a demonstration lesson on copper with charts, maps, copper utensils and pictures, to a group of thirty teachers specializing in correlation. They gave an assembly hall exercise to the entire school on copper. I believe that these two demonstrations were better tests than any written questions and answers could be and I feel sure that the material was almost indelibly impressed on their minds,

...of the history of education...
...of a great future and...
...the world will...
...many pages...

...of our...
...of work...
...also...
...

I believe that we have, by our close...
...of teaching...
I believe that we have seen...
...in 1950, more...
...on without...
...remember...
...the...
J. A. ...

...of...
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because they learned it to give to others, just as we teachers do. We well know how thorough such learning has to be.

SUMMARY

Since history, geography, civics, sociology and economics, have in their very natures, so much in common, they can hardly be well taught uncorrelated. They merge into one another very naturally.

To be sure, enthusiasts have done an injury to the cause of correlation by overstressing the idea and "scrambled" courses of study have resulted in some places; however those few errors do not in any way prove anything against the value of correlating the social sciences; they merely show plainly that we must use common sense.

I trust that my examples of actual correlation may prove to the reader that we taught history, geography and civics more thoroughly and more interestingly thus correlated, than we could have taught them separately.

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Summary

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CHAPTER III.

GEOGRAPHY AS A MOTIVATING UNIT FOR CORRELATING SCHOOL SUBJECTS

I believe that geography, properly taught, can be the most interesting study in the school. I mean, of course, human geography.

Inasmuch as food, shelter and clothing are the needs of all people everywhere, what is more vital than a study of people and their needs? Since crops, time, tides, transportation, scenery and communication are all geography, we must see that it is a very utilitarian subject.

If, as of yore, pupils merely "bound the states, learn the capitols, and name the capes of Asia beginning at the north-east", they will "hate joggerfy". If, on the other hand, by scanning the newspapers, they find, as my boys did, that in two week's time 49,000 different places were mentioned in two daily newspapers, 6 places were pictured large, 4 maps and 16 graphs of products appeared, they see that business, commerce, travel, and comfort savor of geography.

To be an intelligent reader, listener, speaker or automobile driver one must know geography. What a revelation

THE HISTORY OF A COUNTRY
AS A HISTORY OF THE PEOPLE

I believe that geography, properly taught, can be the most interesting study in the school. I mean, of course, human geography.

Teaching at home, whether and whether and the needs of all people everywhere, what is more vital than a study of people and their habits, their crops, their times, their languages, their sciences and communications and all geography, we must see that it is a very different subject.

It is of course, equally merely "negative" studies, like the English, and have the value of this beginning of the history course, and will "make history" in the classroom, by assembling the materials, and then, as it were, that in two weeks time 40,000 different places were mentioned in the daily newspaper, a picture was pictured large, a tape and the fragments of products appeared, and the most business, comments, travel, and contact were of history.

To be an intelligent reader, listener, speaker or contributor gives one much more geography. What a revelation

to some boys to find out that all geography is not encompassed in their one text book!

Much of history depends on geography and surely much of progress. Why did the Pilgrims settle at Plymouth instead of at Provincetown? Why was Cornwallis conquered at Yorktown rather than at Brandywine? Why did the early settlers remain along the Atlantic Coast so long? Why did we buy the Danish West Indies? The answers are all found in geography. I believe that we can and should correlate geography with all our other work. I believe that we should so teach our geography that we lead our pupils to see that all people are neighbors, all need the products of other lands and other climes, and all have rights that must be respected. I believe, too, that we can teach a love of nature and the beauty spots of earth in our geography.

For many years after hearing my fifth grade teacher tell of Mammoth Cave, I longed to see caves and planned on trips. Never could Luray, Endless and Shenandoah Caves have so thrilled me had not that teacher been so enthusiastic and passed it along. I hope it is not a divergence to remark that the richer the teacher's store of travel, reading, and study, the more she can (but alas does not always!) enrich the pupils' imaginations.

to some degree to find out what all geography is not concerned
in itself one very little!

Much of history depends on geography and surely upon
of progress. Why did the Pilgrims settle at Plymouth instead
of at Providence? Why was Jamestown considered at Virginia
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all need the products of other lands and other climates, and all
have rights that must be respected. I believe, too, that we
can teach a love of nature and the beauty spots of earth in
our geography.

For many years after leaving my little grade teacher
hall of the school house, I longed to see nature and planned on
trips. Never could I see, however, and I remained at home
so lonely as that first winter upon so enthusiastic and
passed it alone. I hope it is now a livingstone to report that
the richer the teacher's store of travel, reading, and study,
the more the sun (but also does not always!) turn in the pupils'
imagination.

Since geography has great possibilities of values for civics, for vocation, for leisure and for worthy home membership, it is a splendid hub from which correlation spokes radiate to the other studies in our circle of learning. It seems to me that there is no better place for the teacher to instill the idea of neighborliness, of tolerance, and of "good will to all" than in this study of human geography.

It is all very worth while. Call it correlation, call it social science, call it economic geography; call it what you will, but get that idea into it and capes and bays will retreat into their relative importance or unimportance as the case may be. Frankly, I have never been able to teach geography in a vacuum, I have to combine it with history, nature study, physics, sociology, mathematics and economics. Of course, we must keep special aims in view and not outrage our courses of study, although they may seem to be kept in the background, but, isn't that the proper place for outlines?

Since regional or place geography has been taught in the lower grades, I feel that it is a waste of time and is non-functional to do any general map work in the upper grades. Maps, however, should be omnipresent in abundance, and, like friends, always to be turned to in case of need. Lists of names of places should not be learned or rehashed. Instead, places

Since geography has great possibilities of various

for advice, for vocational, for leisure and for every phase
membership, it is a splendid hub from which diversified spheres
radiate to the other sciences in our circle of learning. It
seems to me that there is no better place for the teacher to
instill the idea of wholeness, of tolerance, and of "good
will to all" than in this study of human geography.

It is all very well to say, "Call it correlation."
Call it social sciences, call it economic geography, call it
what you will, but the fact is and ought to be that
will represent these fields as separate and unimportant
as the same may be. Truly, I have never been able to
teach geography in a vacuum. I have to combine it with history,
nature study, physics, psychology, mathematics and economics.
Of course, we must keep special lines in view and not confuse
our students of study, but the fact is they need to be kept in the
background, but, isn't that the proper place for correlation?

Since I feel that geography has been taught in
the lower grades, I feel that it is a waste of time and its non-
functional to do any general map work in the upper grades.
Now, however, should be concentrated in advanced, and, like
other, ways to be learned in case of need. Study of maps
should not be learned or retained. Instead, places

should be located as the necessity arises. Areas, crops, etc. should be dealt with comparatively, as the elementary facts were learned in lower grades. We should give our own country the lion's share of time and attention and study the others as they affect us and our needs. Selfish? No! Sensible.

We found the study of the newspaper for geography an excellent check. Must we know where those 49,000 places are? No! Will we remember them if we locate them? Again - No - but we will know the most important ones, and, better still, we will know where to look whenever we do wish to locate a place. That, after all, is real education. We are not walking encyclopedias, but we should know where to turn in order to find the answers to our problems through life.

If one reads a weather report in which thirty-seven different places are mentioned, it means much more to the person who knows where those places are than to one who does not. Naturally, a person planning a trip to St. Louis tomorrow, or having a brother in Kansas City, has a keener interest in the weather in those two places than a person who has not that personal touch. We can not get away from that personal factor. The wider the interests, the broader the life, and that must be our fundamental aim in all education - the fullness of life in its best sense.

"Why is there \$220,000,000 of American capital invested in Columbia?" asked a newspaper. The answer is: Oil, fruit, platinum and cocoa. Why are those millions bound to be protected? It is very near Panama, is the answer.

Why are bananas so cheap some days that the hucksters are selling them in the alleys? Maybe the weather - probably some shipping delays due to storms caused too many fruiters to dock on the same day. Surely that is geography and economics and domestic science.

If, in all this work, we use stereoptican slides, motion pictures, post cards, newspapers, graphs, production maps and trade magazines, we have not only intra but also extra curricula correlation. There is vast amounts of materials in geographic readers and in text books.

(9) De Forest Stull claims that American geography texts are the most excellent available in any language. A geography text is more than a reference book, it is the main support of teacher and pupils, and the choice should be made scientifically instead of haphazardly. A text book "constitutes the main collection of pictures, maps, diagrams, graphs and statistical material and reading matter available for use

(9) De Forest Stull - Geography Text Books - in Novel Instructor and Primary Plans, January 1929, p. 27.

"Why is there such a large number of people who are not interested in the study of the history of the United States?"

Answered in a letter to the Editor of the "New York Times" dated June 10, 1900.

Editor, "New York Times": I have the honor to acknowledge the receipt of your letter of the 10th inst.

and in reply to inform you that the same has been forwarded to the proper authorities for their consideration.

Why are we so slow to learn from the history of the United States? The answer is, I think, that we are so slow to learn from the history of the United States because we are so slow to learn from the history of the United States. We are so slow to learn from the history of the United States because we are so slow to learn from the history of the United States. We are so slow to learn from the history of the United States because we are so slow to learn from the history of the United States.

It is in all these things, and in the study of the history of the United States, that we are so slow to learn from the history of the United States.

History is the study of the past, and it is the study of the past that we are so slow to learn from the history of the United States. History is the study of the past, and it is the study of the past that we are so slow to learn from the history of the United States. History is the study of the past, and it is the study of the past that we are so slow to learn from the history of the United States.

Why is it that we are so slow to learn from the history of the United States? The answer is, I think, that we are so slow to learn from the history of the United States because we are so slow to learn from the history of the United States.

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I am, Sir, very respectfully,
Your obedient servant,
J. M. Smith

of both teacher and pupil" says Stull. It does, but unless the teacher vivifies it, it remains just that. If the pictures, maps and reading matter are made to live, to beckon one to far places, to make one feel the billowing ocean, and the heat of the tropics, to picture the Russian peasants and Swiss farmers, then, teacher and text book have not been in vain.

We have found that geography is a subject of great interest to our pupils and that it links itself with many of the other school subjects. History, English and science are so woven into the whole scheme that the impetus carries over into the other studies. No co-worker has ever yet complained of intrusion on his subject. In fact, they welcome any intelligent, live interest. In the study of each important commodity of commerce, one may find a wealth of material. We found that leather measured up very well to this standard.

LEATHER

Leather is one important product of our country and has to be taught somewhere, somehow. There was no "have to" feeling when, one morning, we received two post cards of scenes on western ranches: cowboys, ponies, steers and the entire setting, even to a Round-Up. Cowboys! Was there ever a boy who did not thrill to pictures of cowboys and round-ups? More vivid still were these when one knew the sender of such cards

and read his graphic, pencilled messages on them. Truly, there was magic in those vivi-colored cards from a Montana ranch. The bucking bronchos, kicking steers and virile cowboys seemed alive as no book pictures ever had. Could shoes really be made from the hides of such animals? Yes.

The study of leather was not scheduled for that particular time, but that was the time the class was ready; so we traced leather from a Montana ranch to a Boston shoe store. Since Boston is the largest leather market in the world and since we all use leather, we should know about its commercial value.

They contrasted the present methods of ranching with those of fifty years ago, which study served to show them plainly not only how rapid had been the "March of Democracy" westward, but also that this progress of civilization brought with it many responsibilities as well as many privileges. With better housing, lighting, policing and sanitation came more taxes and greater curtailment of personal liberty. Civics? Yes - the life of the people.

Text books, magazines, library books and shoe manufacturers aided us. The non-arable character of the grazing lands, influence of westerly winds, hardships of the cowboys, dangers to cattle, huge capital invested, means of transporting animals,

the passing of humane laws concerning transportation, the stock-yards of Chicago, St. Louis and St. Joseph, government inspection and preparation for market were all studied, and all available pictures of cattle cars, stock-yards, etc., were displayed. Here we had geography, history, hygiene, civics and vocational guidance all merged into an interesting piece of work. There was no conscious effort to put them there, we found them there as we studied, not separate, but together. In the previous chapter, for the sake of clarity and emphasis, we drew attention separately to the different subjects that were correlated. As the reader becomes better acquainted with the subject, he will realize that they are not often as distinct as that in the learning process. That was the teacher's method of analyzing the correlation after the work had been accomplished. During the working out of the problem, they are really in a state of flux.

A shoe manufacturing concern that boasts of having made shoes for every United States President for thirty-five years became interested in our work (or perhaps was made desperate by our questions) and assembled for us a shoe exhibit in minutest detail, showing each step in the construction of the shoe as performed in their factory. Still there remained an unanswered question - "How are those stiff, hair-covered hides converted into the nice smooth leather used in the factory?" We resolved to tan a hide, but where would we get it? As so often happens, the answer was at our back door, and,

had the wind been from the leeward, we would have discovered it long before. Just around the corner in a shack, a man had a small hide business. He willingly gave us a hide not quite fit for his business, but fine for our experiment. That little human contact was a very good thing for the boys. It is always a source of gratification to me to see how readily people in general, rich or poor, laborer or banker, always respond to any request of that kind for the schools. It reflects, not only human kindness, but a universal interest in education.

After acquiring the hide, the boys looked up methods of tanning and decided to soak the hide in lime water for two days. Lo! The hairs were easily scraped off then. Next they soaked it in a solution of red oak bark for two days. After that, they put it into a tannic acid solution for a week, then stretched it on a board to dry. How they watched that hide! Soon it was clean, but hard. The final step was to rub it with grease until it became soft and quite like the piece of leather from the factory.

All that was a splendid excursion into the realms of science and splendid practice in studying a problem through to the finish.

We even ventured into hygiene or beauty culture, if

you please. It seemed a fine time to talk about the need of oil for skins in general. Just as rubbing grease into that hide had softened it, so cream softens human skin after the use of soap, after exposure to wind and after sunburn. As the acid had eaten the hair off that hide, so acid from decaying foods eat into our teeth and cause decay.

The same shoe firm that loaned us the exhibit, also loaned reels for moving pictures. These showed their employees and machinery in action. This brought the subject of shoe machinery, in which the United States leads the world, to the attention of the class. No longer does the cobbler with a pack on his back spend a few days of each season in each village; no longer do New England homes have small back rooms with benches where five or six shoe-makers peg shoes all day. No, this is an age of machinery, efficiency and quantity production. There is great competition in the shoe factories now and each worker must produce a certain amount of work each day or his place is soon filled by a more speedy worker. Of course, this was economics but our pupils must become aware of industrial conditions and must realize the necessity for being "on the job". The world has no place for a shirker, a clock watcher or a poor workman.

The question arose as to whether or not the introduction of machinery had caused unemployment for many. We

you please. It seemed a fine time to look about and see
 all for him in general. Just as looking around the
 wife and children is, as even before the war after the
 use of money, after expenses to him and other things. As
 the wife had asked the girl off that time, as she then
 brought home and into the house and came back.

The case about the time I was in the family,
 and I have been for many years. I have never been
 employed and machinery in action. This brought the subject
 of the machinery, in which the United States has the
 world, to the attention of the class. It is longer than the
 world with a part on his back and a few days of work
 as soon as each village, no longer do they have more than
 small back rooms with benches where live or six men-
 and three all day. This is an age of machinery, electricity
 and quantity production. There is great competition in the
 class factories now and each worker must produce a certain
 amount of work each day or the class is soon filled by a new
 worker. Of course, this was economical for the worker
 that became a part of industrial civilization and was really
 the necessity for being "on the job". The world was no place
 for a worker, a clock worker or a poor worker.

The question arose as to whether or not the intro-
 duction of machinery had caused unemployment for many. It

tried to show a picture of this situation covering more than a narrow, local view. A tremendous amount of steel is used in this machinery. The iron must be mined, refined with the use of coal and limestone, then transported and manufactured. As a rule, lumber, leather, and other products are combined in the finished machine and quantities of oil are used for lubrication. That means miners, lumber men, chemists, mechanics and railroad and ship employees are all necessary for this machinery. Add to that, the men busy about the business of patenting the machine, installing, repairing and furnishing power for it, and, finally, the operator. That is the only fair way to view the situation; it is a broad view and led us to study leather as a world product.

We found that Argentina, Canada, Western United States, Australia, Morocco, Spain and South Africa were important sources of leather supply. That led us to studying about the transportation of the animals and the hides, to the realizing of the great improvement along these lines, due to government inspection and then to that very important question of return cargoes. The latter is of great importance to men of commerce. A cargo is usually found, due to the need of the ranchers, herdsmen and their families of food, clothing, shelter and other comforts, for which they must depend on the outside world.

The question of tanning in various parts of the world came up here; and we studied about the various methods, the necessity for this process and the materials required for it. The importance of hemlock and oak forests as a supply for tanning materials was stressed and the world's need of chemists. No one cared if forest conservation and vocational guidance appeared hand in hand. The boys dwelt on the fact that Rockefeller and other rich men, realizing the importance of chemistry had endowed colleges where chemists could have time and materials for experimentation in this science.

The largest leather ports were found to be Boston, New York, London, Sydney and Buenos Aires; the stock-yard centers Chicago and St. Louis; the round up centers Billings and Calgary, while the largest leather manufacturing cities were all in our own country: Boston, Philadelphia, New York, Chicago, St. Paul and Brockton.

The connected industries are machine and tool manufacture, the making of paper and wooden boxes, the maintaining of shoe stores and the work of the traveling shoe salesman.

Here, they branched off into history and current events. It was not possible to study leather without discovering

The question of training in various parts of the

world came up here, and we studied about the various methods,
the necessity for this process and the possibilities regarding the
it. The importance of research and our efforts to a degree
for scientific methods was stressed and the world's need of
philosophy. We also tried to connect our own work with the
philosophy appeared much in mind. The boys dwelt on the fact
that Haeckel's and other ideas were, realizing the importance
of philosophy and endeavoring to connect our own work with
this and effort is the experimentalist in this science.

October 1904

The various scientific parts were taken up by Haeckel,
New York, London, Sydney and several others; the French-
Canadian, Chinese and the others; the study of various
and others, with the various (rather uninteresting) ideas
and all in our own country: Boston, Philadelphia, New York,
Chicago, St. Louis and London.

The connected subjects are mentioned and
mentioned, the study of parts and whole, the
relation of these efforts and the work of the traveling
scientist.

Now, they returned to the history and current
events. It was not possible to study history without discussing

~~the~~ differences between the ranchman's views on tariff and the manufacturer's. It is an ever recurring topic and has not yet been settled satisfactorily.

They went further back into world history in their work on the evolution of the shoe. It was interesting to find that even those early races which are supposed to have gone barefoot, frequently wove some sort of shoe production like a sandal. Pictures of Egyptian, Phoenician, and Roman sandals were found, of Indian mocassins, of French sabots, of Dutch wooden shoes, of Eskimo snow-shoes, of the wee slippers of Chinese ladies of former years, of the spurred boots of cavalrymen, of lumbermen's stout shoes, of the high laced boots of mediaeval times, of the buckled slippers of our own Colonial times, of walking shoes, of dancing slippers and of many, many more kinds of foot coverings. Romance and history seemed to walk in our midst.

There was a great deal of reading and literature during all this work. "The Virginian," "On a Cattle Boat," "The Round Up" and books of that kind as well as extracts from Mary Antim's and Mary Boyle O'Reilly's stories of the lives of factory workers.

Art was not entirely neglected as this same shoe firm presented us with a copy of the famous "Old Cobbler", and some paintings of shepherds with their flocks as well as some of cattle. Leather was by no means the only article of commercial value studied. Copper gleamed anew in our study of geography.

COPPER

In the previous chapter, we spoke of our work on copper in regard to its relation to our social sciences but after we were well launched on the geography of copper we found that our work just would not stay within geographical boundaries but spread into English, as when the boys wrote letters to the Custom House to inquire about the Tariff Acts, and to the brass polish companies asking about the ingredient of their polishes. The replies stated that they could not disclose their formulae. It was a new experience to the boys to receive such a reply and they were daunted for a while. Finally, they decided to find out for themselves and consulted their two faithful friends - the dictionary and the encyclopedia - suggested the answer, i.e., that oxalic acid is the base of most brass polishes. I consider that a valuable experience because it impressed them with the value of those two books.

Their English was not all letter writing. They had oral and written compositions on The Uses of Copper; Alloys of

It was not actually neglected as this name was left

presented as with a copy of the famous "Old English" and

some feelings of antiquity with their respect as well as some

of course. Another way to be seen the only article of

concerned with the subject. Robert Fleming and in the way

of geography.

Notes

In the first of these, we speak of our work on

ought to regard as its position on our social sciences and

after we were well advanced in the geography of copper we

found that our work had found not only within geography but

boundaries and spread into history, as when the boys wrote

letters to the Council House to inquire about the history of

and so the boys had a general - a general - a general - a general

of their position. The result was that they could not

discuss their position. It was a new experience to the boys

to receive such a reply and they were surprised to find

finally, they decided to find out for themselves and consulted

with two English friends - the historian and the geographer

discussed the matter, i.e., that the whole field is the field of

these positions. I consider that a valuable experience because

it introduced them with the value of these two forms.

Their English was not all better written. They had

and had written composition on the uses of copper. All of

Copper; Through the Saw with a Load of Copper; Copper in the Trades; Copper in the Fine Arts; Alexander Hamilton; The Statue of Liberty; A Copper Miner's Health; and many, many more subjects. As some of these were published in a school paper and others used for an exhibit we had real correlation.

A few science lessons proved that copper is ductile, malleable, does not rust, is a good conductor, has a lustre, will corrode but can be cleaned with oxalic or acetic acid. Thus, the class saw why copper is so valuable to mankind. The pictures of the locks of the Soo Canal with its huge gates, locks and levers made a fine bit of science for them, also. They were interested to discover the important part that copper played in that tremendous engineering project.

The words ductile, malleable, corrode, and others immediately became words of their spoken and written vocabulary; thus spelling was a necessary tool for science and English.

Hygiene held its own place in the curriculum. The boys had lessons on Antidotes for Brass Polish, since they had read of people poisoned by swallowing brass polish by mistake, Prevention of Accidents from Electricity, and Dangers of a Copper Miner.

The stock market news in the papers and on the radio seemed to boom just then and such items as "Copper Advances on Fresh Demand for Metal" and "Copper Gains Better than Two Points" gave us an excellent opportunity to turn to work on "Commission" in arithmetic. The tariff work correlated with their study of "Duties" in arithmetic and helped make it easy to understand. The actual computation of the amount of copper wire needed for one radio necessitated rapid work in decimals and the use of the formulae; while the actual purchasing of radio parts at discount gave them much work in "Discount". We seized the opportunity to review "Percentage" in all forms. All this work was of eighth grade standard, so we had not violated a precious outline.

Geography started all the discussion which so naturally correlated with and motivated the rest of the curriculum. It even impelled us into a study of the Fine Arts. Too often do we forget those finer things in our rush for the more material things of life, but in so doing, the lives of our pupils have lost so much richness. If some appreciation of art is not instilled into these boys in these grades they may never have it. Therefore, it seemed very much worth while as many specimens as possible of beautiful hand wrought things of brass, and to copy designs on old brass shields, bronze vases, etc. The use of copper and bronze by the ancients

The above quoted news in the papers and in the

radio seemed to have been taken from the "Copper

Advanced on French Front" and "Copper Ship's Letter

than the others" gave us an excellent opportunity to turn to

work on "Copper" in artistic. The artist's work consisted

with their study of "Copper" in artistic and helped make it

easy to understand. The actual completion of the amount of

copper was needed for our artist's necessitated work in

decisions and the use of the instrument; while the actual per-

centage of radio work at present gave them much work in

"Copper". We asked the opportunity to review "Copper"

in all forms. All this work was at night, and was, as

we had not visited a previous meeting.

Therefore, after all the discussion which we

actually conducted with and motivated the rest of the com-

mittee. It even happened as into a study of the time when

the other side of the radio work which is now being done for the

more material things of life, but in a country, the lives of

our people have been so much improved. It was a question

of art is not limited into these days in these places they

may never have it. Therefore, it cannot very much worth while

to any questions as to the art of beautiful and artistic things

of art, and so only depend on the artist's ability, because

was, the use of copper and bronze by the ancients

brought us back again to history and geography.

It seemed impossible to come to a definite stop at any one place, always there was an open door with a "Why" leading us on:

WHYS AND OTHER WHYS

Why do ships have copper keels?

Why are hot water boilers made of copper?

Why are statues made of bronze?

Why are roof gutters made of copper?

Why do brass faucets turn green?

Why does brass polish remove that green?

Why will salt and vinegar do the same?

Why are tablets made of bronze?

Why were copper tools used before iron ones?

Why is copper wire used for electrical purposes?

Why is brass used for jewelry?

Why did Houghton, Michigan, grow so rapidly?

Why is Japan buying so much copper?

Why is copper used in the arts?

Why is a policeman called a "cop"?

Can you answer all these? We can.

Leather, copper, tin and cookies - all were grist for our correlation mill. The profit and the pleasure we derived from making cooky cutters was very much worth while.

COOKY CUTTER

Does "The Geography of Cookies" sound interesting? It is, vastly so. Cookies are usually interesting, gastronomically and geographically.

Sometimes discouraged boys, retarded boys and boys with speech and other defects, all seem to gather in one class in a certain year. Each boy has to be awakened in a different way and, once aroused, his sphere must be filled constantly with things to be done, things with a meaning, so that the newly awakened interest may conquer the habits of indifference and inertia fostered in those discouraged years of the past.

A certain class of boys found themselves and their places in the sun through a cooky cutter, that culinary utensil that has shaped dainties for the youths of mankind for ages. That humble implement opened up unexplored vistas to their not too keen eyes.

Their greatest peak of enthusiasm seemed to be at

recess when they ate cookies, so, as we were studying tin in geography, we remembered that cookies are cut with tin utensils; in fact many household articles are made of this material.

Cooky seemed a magic word, so, they decided to ask the sheet metal shop instructor if they might make cooky cutters in their shop period. They received the usual courteous and co-operative assent which they had expected, and soon fell upon the sheet metal armed with zeal and shears.

The class decided to find out the most common kinds of cookies. The answer is: Molasses cookies, sugar cookies, nut cookies, chocolate cookies and cocoanut cookies. What ingredients make these cookies? Here we turned to the cooking teacher and to the mothers of the boys. Surely any such contact with the home is helpful. It is natural and salutary for a boy to turn to his mother for information.

The boys arranged a stand for a map and affixed this to a table sufficiently large to hold household size samples of the products or ingredients used in making cookies. From each sample colored ribbons stretched to the map and were attached to that country which is most noted for producing that commodity. All these cookies contain flour, and most of our flour is milled in Minneapolis; hence, a ribbon from the bag of flour to that city. A broad band of colored crayon encircled the wheat belt of the United States. From the molasses jug ran two ribbons:- one to New Orleans and one to Porto Rico.

A gay ribbon stretched from a large cake of chocolate to Venezuela. California and Spain produce nuts, northern Africa gives us cocoanut. We have large salt mines in New York and Ohio; saleratus is made from common salt and soda; sugar comes from Louisiana and Cuba; lard from the stock yards of Chicago, where the hogs of Iowa and other Central States are prepared for market; ginger and cinnamon grow in the West Indies; while the milk comes from nearby dairies.

Our cookies seemed, therefore, to connect us with far countries and strange people. One might say "A taste of cooky makes the whole world kin."

Many bits of economic geography, of history and of science grew out of these lessons. For instance: the old, old quest for spices that led to the seeking of new trade routes to the "Spice Islands"; the increasing growth of the sugar beet industry because of the adaptability of the sugar beet to temperate climates; and the process of evaporating sea water to obtain salt.

"When did people first make cookies?" seems to be an unanswerable query, but cookies have their own place in literature. Our old friend Mother Goose speaks of the "baker" along with the "butcher and candle-stick maker", the "Queen of Hearts" made tarts, you know and then there was the famous "Gingerbread Man."

A very typical illustration of the
Tennessee, Kentucky and Ohio
gives an excellent view of the
Ohio; and it is a very common sight
from Lexington and other points in the
about the city of Lexington and other
for example; Lexington and other
the city of Lexington and other.

Our countrymen, therefore, to compare us with
let ourselves be called "a little of
everywhere and a master of nowhere."

Many of our people, however, it is not only
science that is the basis of the
old quest for truth that led to the seeking of new
roads to the "white man's" and the increasing growth of the
world, but the very basis of the adaptability of the
best of the human mind; and the progress of the
world is the result of this.

"When all people first were created," says the
unmistakable fact, but we have not their own
interests. The old things of the world are
along with the "white man's" and the "black man's"
Hebrew and other, and the world is the result
of this.

Flour for baking has been milled for centuries, long, long ago, even as the "Miller of the Dee" sang his merry song.

In order to connect our work with the boys' shop activity, we had them make cooky cutters in the sheet metal shop during their manual arts periods.

The boys were interested in finding how many different shapes of cooky cutters are in use, so, in its own way, a committee made a survey and gave to the class a long list:- square, circular, harp, hexagon, club, spade, diamond, heart, crescent, rectangular, duck, chicken, rabbit, cat, dog, lion, bear, bird, etc., or, as they said, "All sizes and shapes for all people for all occasions."

As interest grew in the matter, they discovered cooky sheets, that is, flat sheets of tin for baking cookies. These are a great improvement on the old cooky pan with corners full of flour and grease after baking. No more digging out those corners by tired mothers. The boys made cooky sheets for their mothers. This was a splendid opportunity to stress the value and the need of the labor saving devices of today. May that lesson sink in deeply! We hope to make good husbands of those boys.

When the thing was done, the man said for another

long, long day, even as the "Willie of the West" sang his

dear song.

In order to connect our work with the boys' song

book, we had their song book in the front of the

book during their lesson and practice.

The boys were interested in finding out what all

these songs of boys' songs were in, and in the way

we, a committee made a survey and gave to the class a long

list: "My Song", "My Song", "My Song", "My Song", "My Song",

"My Song", "My Song", "My Song", "My Song", "My Song",

"My Song", "My Song", "My Song", "My Song", "My Song",

for all people for all occasions.

As the boys were in the school, they discovered easily

that the boys' songs were in the boys' songs. These

are a great improvement on the old song book and the boys' songs

of the boys' songs. We were singing and singing

and singing the boys' songs. The boys were singing the

boys' songs. This was a splendid opportunity to show the

value and the need of the boys' songs. The boys' songs

that we were in the boys' songs. We were in the boys' songs

and singing the boys' songs.

"Seeing is believing", "The proof of the pudding is in the eating", and the like are old adages with much truth.

"Learning by doing" is a very popular slogan at present. So, after the manner of Caesar of old; ~~we~~ saw, we ate, we learned, we did and we believed with the whole school aiding us.

The woodworking class made a pastry board, our sheet metal boys made the cooky cutters, and the cooking class made the cooky dough. One eager lad, spotless in a chef's costume, rolled the dough very thin, and, "with one turn of the wrist", as he said, cut cooky after cooky, - round, square, hexagon, etc. No need for an "Eyes this way, boys" admonition; as not an eye wavered during the process. These cookies were quickly laid on the cooky sheet (that had no hard-to-clean corners) and carried to the cooking room which was soon filled with that spicy molasses cooky smell. Some of that odor was wafted into class rooms where it mingled with French and algebra. Why not?

The cooky sheet was not dropped on its journey through corridors and over stairs. Its proud carrier did not scurry headlong toward the cooking room. His was no ordinary mission. No tray of gifts to pagan gods was ever held a more sacred trust than those dozens of cookies. Was it that "sure way to a man's heart" that made it so vital? Perhaps. Anyway, the boys ate the cookies for lunch that noon. After all, what is more important to any healthy boy than his food?

"Feeling is believing", "The proof of the pudding is

in the eating", and the like are old adages with which people

"feeling by doing" is a very popular slogan at present.

After the manner of James of old, we say, we believe,

we did and we believed with the school siding by.

The word "feeling" also has a fairly long and varied

etymological history. The word "feeling" is derived from

the Teutonic root, "fehan", which is a derivative of

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The more we teach our boys to respect the farmer who raises food and the good mother who prepares it, the firmer we build our foundations of real values and real people.

The material used to make the cooky cutter is iron coated with tin. Tin is found in comparatively few places in the world. England has large tin mines now and always has had. In fact, they had much to do with history in the Middle Ages; as it was those tin mines that first attracted the Romans to England and caused ships to venture out on the Atlantic Ocean. Tracing still farther back, the boys found that tin was known and used in the time of Moses, and that the Phoenicians dealt in tin.

There are productive tin mines in Australia and in the Malay peninsula; both English colonies. Bolivia, South America, is rich in tin; while Germany and Mexico also mine tin. There is a greater demand now for tin than there ever was, so, in time, our own tin mines will probably be developed.

The boys know the properties of the various metals, so could understand why tin is so generally used. It is malleable, flexible and ductile. This was good science work. A bar of solid tin was pounded and bent to prove these statements

The more we know of the life of the people

the more we know of the life of the people

the more we know of the life of the people

people

The material used to make the body of the

coated with the. The is found in the body of the

the world. The world has been the same since

has. In fact, they have been the same since

After, as it was those who were the first

From the beginning and ended with the same

Atlantic Ocean. The world is the same since

that the world was made in the time of the

the world is the same

There are two main types of the world

the world is the same; the world is the same

the world is the same; the world is the same

the world is the same; the world is the same

the world is the same; the world is the same

the world

The world is the same; the world is the same

the world is the same; the world is the same

the world is the same; the world is the same

the world is the same; the world is the same

and the fact that they saw the thin sheets of tin proved the third. Tin loses its lustre when exposed to the air, but otherwise is not affected. The many household utensils prove this. To compare it with iron in this respect, a few square inches of tin were scraped off a sheet of tinned iron and the whole was then left exposed to the air for a few days. The exposed iron patch rusted while the tin surface did not.

A brief study of alloys was necessary here. The fact that iron does not combine with tin is the very reason that it is used to coat iron. Tin does combine with lead. This combination makes pewter, that dull metal of great grandmother's day. The boys assured us that a new kind of pewter is fashionable now. Lead and tin combined in equal parts, make solder, that all important material to sheet metal workers. Tin combined with copper makes bronze. Since neither of these metals rust, we have bronze statues and bronze tablets to perpetuate the memory of famous persons and places.

The metal worker must know these and many other facts which were probably unknown to the tin pedler of former days. Who remembers that person so well known in country homes forty years ago? Boys did not have sheet metal shops in school then. People lived far apart and stores were few. Woolworth's red front stores were unknown then. Pedlers went from door to door.

and the fact that they saw the thin sheets of tin pressed the
sheet. The loose tin leaves when exposed to the air, but
otherwise is not affected. The very household articles prove
this. The exposure it will bear in this respect, a few square
inches of tin were wrapped off a sheet of tin and the
whole was then left exposed to the air for a few days. The
exposed thin patch faded while the tin surface did not.

A trial study of alloys was necessary here. The
fact that iron does not combine with tin is the very reason
that it is used so much. The tin does combine with iron.
This combination makes pewter, but still metal of great strength.
Mother's day. The story reported is that a new kind of pewter
is fashionable now. Lead and tin combined in equal parts,
make solder, but all important material to about metal workers.
The combined with copper makes bronze. Since history of bronze
details that, we have bronze statues and bronzes related to per-
petuate the memory of famous persons and places.

The metal worker must know these and many other facts
which were probably unknown to the tin dealer at former days.
The knowledge that pewter is still known in country homes today.
Years ago? They did not have metal shops in those days.
People lived far apart and there were few. Knowledge was
lost and was unknown then. Pewters were made then but not

The tin pedler plied his trade in a big red cart drawn by an old white horse. He rattled along from village to village with his pans, pots and kettles and maybe a few brooms and dishes. The housewives sold him their old rags and bought his shiny tins. Many homely tales of the tin pedler are told in New England stories. Is it possible there is any reader old enough to remember that familiar figure? He was a pedler of tin; not a worker on tin. A worker on tin is a tinsmith, sometimes called a tinner, or a tin man, or a tin knocker or a tinker. The old time tinker in Scotland and Ireland was well known in Scotch and Irish stories. He travelled about with his load on his back, beating a kettle to proclaim his trade. This made a tinkling sound, hence the name "tinker". Children and dogs followed him and mothers welcomed him. People did not know much about soldering in those days, so, when a pan needed mending, it was put away until the wandering tinker made his semi-annual visit to the neighborhood. He repaired their kettles and pans, spread the news and sang jolly songs.

All this and more the boys gleaned when once they started to learn about cooky cutters. At each turn, they seemed to discover something new and interesting about the subject.

They learned the "Tinker's Song" from the opera "Robin Hood". They needed instruments for this, so in the sheet metal shop they made tin instruments patterned after those used in the opera for that song. They made the welkin ring, and as they sang, - "We like our work just fine," no one could doubt them.

The making of this cooky cutter required mathematics. The circular cooky cutter was taken as the most common type. They needed to ascertain what size piece of stock a boy should lay out to make a circular cooky cutter that would cut a three inch cooky. These boys seemed hardly ready for circular measure, but any work that they needed was their work. So, after a brief introduction to pi, they found that 3×3.14 was 9.42. Decimals are always changed to the nearest sixteenth of an inch in sheet metal shops, and $1/4$ of an inch is always allowed for a lap, so they soon figured that they needed a piece $9-11/16$ inches long. Since the usual height of a cooky cutter is $1-7/16$ inches and the handles are made of waste pieces, it was obvious that each boy needed to cut a piece $9-11/16$ inches by $1-7/16$ inches. More mathematics was necessary to figure the most economical way to cut the tin for a class job; as each boy wished to make a cooky cutter.

The tin comes in sheets 28 inches by 20 inches. As $9-7/16$ inches is nearly 10 inches, so, by cutting the sheet in

They learned the "finger" from the opera
"The Barber". They needed instruments for this, so in 1885
they moved when they made the instruments purchased after
found made in the opera for that time. They made the violin
ring, and as they sang - "We like our work just this," as the
words said.

The making of this body which required instruments
The original body cutter was taken as the most common type.
They needed to purchase what is in place of what a boy can do
and not a male a circular body which had a hole in the
back body. These boys seemed really ready for this
operation, but only when they needed the body work. So,
after a brief introduction to it, they found that it was
not. Bodies are always changed to the most efficient
of an inch in each body shape, and 1/2 of an inch in length
aligned for a leg, so they were right that they needed a
place 1-1/2 inches long. After the body being of a body
cutter is 1-1/2 inches and the bodies are made of wood
these, it was obvious that each boy needed to use a place
1-1/2 inches by 1-1/2 inches. But mathematics was necessary
to figure the real economy of way to cut the wood a class
job, as each boy wished to make a body cutter.

The tin comes in sheets 24 inches by 30 inches. As
1-1/2 inches is nearly 10 inches, so, by cutting the sheet in

half the long way, they had two pieces, each 10 inches by 28 inches. The height of the cutter is $1\frac{7}{16}$ inches or nearly $1\frac{1}{2}$ inches, so, by rough estimating, they saw that 28 inches would contain $1\frac{1}{2}$ inches about 18 times. Therefore, out of one large sheet, they would get 36 cutters, a sufficient number for the class. The scrap pieces could be used for handles. Thus waste was reduced to a minimum.

Drawing is quite important in shopwork, and since mechanical drawing in sheet metal work differs from most mechanical drawing, it deserves a word here. The simple drawing of a rectangle $9\frac{11}{16}$ inches by $1\frac{7}{8}$ inches showed them what to do, as heavy lines in sheet metal drawings represent cutting lines and short dash lines represent folding lines. They learned to reduce waste always. They never cut their patterns directly from a large piece of stock. Instead, they cut squares or rectangles of approximate size and laid their patterns on those.

These boys learned the value of order and system in saving time and energy by following the prescribed steps. That was a much needed lesson for them and we hope it will carry over. The pieces had to be cut and notched, double hemmed, rolled on a forming machine, and soldered together. Then the cutting edge had to be polished and the whole cutter polished.

half the long way, they had two pieces, each 1/2 inches by 2 1/2 inches. The height of the center is 1-1/2 inches or nearly 1-1/2 inches, so, by rough sketching, they saw that 2 1/2 inches would contain 1-1/2 inches about 2 1/2 times. That is, out of the large sheet, they would get 20 copies, a sufficient number for the class. The extra pieces could be used for handles. This waste was reduced to a minimum.

Drawing is quite important in shopwork, and since mechanical drawing is sheet metal work differs from most mechanical drawing, it deserves a word here. The typical drawing of a rectangular 2-1/2 inch by 1-1/2 inch sheet shows them that to do, as they draw in sheet metal drawings represents cutting lines and holes which lines represent folding lines. They learned to relate waste pieces. They never cut their patterns directly from a large piece of stock. Instead, they cut squares or rectangles of approximate size and laid their patterns on them.

These boys learned the value of order and action in saving time and energy by following the prescribed steps. That was a much needed lesson for them and we hope it will carry over. The pieces had to be cut and folded, and, indeed, relied on a forming machine, and soldered together. Then the cutting edge had to be finished and the whole piece polished.

Spelling was not neglected. In order to do note book work or to write any expositions, they needed to learn to spell such words as: cooky, solder, England, shears, metal, cutter, molasses, Malay, dough and ingredients. Some of these words were in their spelling books but others were new. They needed to know them. After all, that need is the keystone of learning; whether we call it an "urge", a "project", or "correlation".

Hygiene must never be forgotten, for healthy, happy workers are one of America's greatest needs today. Everyone talks about calories, so we did. Cookies and milk are full of them. We sell cookies and milk, at cost, to the pupils each day during their brief recess. Mothers of growing children have always given them cookies and milk for light lunches. Such a lunch furnishes starch, sugar, fat, and mineral salts, that is, the building food, the power food, and the heating food required by the body. Do you know how many calories in three molasses cookies and a half-pint of milk? Four hundred! "Do not eat too many such lunches if you are fat" cautioned our embryo dietitian who looked up calories.

We started with geography and through that and a cooky cutter, we went nearly around the world. A simple cooky cutter was the open sesame to all those doors for us:

Spelling was not neglected. In order to do this

back work or to write any composition, they needed to learn
to spell such words as: ocean, water, English, street, hotel,
cutter, restaurant, Mayor, through the investigation. Some of these
words were in their spelling books but others were new. They
needed to know them. After all, this was the purpose of
learning; whether we call it an "art", a "science", or
"education".

Students must never be forgotten, for they, too, were
workers and one of America's greatest needs today. They were
taught about education, as we said. Cookies and milk and fruit
of course. We sell cookies and milk, at cost, for the purpose each
day during their brief recess. Minutes of growing children
have always given these cookies and milk for light lunches.
Such a lunch furnished at each recess, for the children's sake,
there is, the building food, the best food, and the best
food required by the body. Do you know how many children in
these lunches cookies and a half-glass of milk? That's important!
"Do not eat too many such lunches if you are fat," cautioned
our English teacher who looked at children.

It started with geography and through that and a
study of history, we went nearly around the world. A slight study
cutter was the open season to all these foods for us:

geography, history, literature, spelling, hygiene, music, drawing, science and household arts, all so correlated and so tin-coated that these boys made better cooky cutters in the shop and learned more in the class room than they ever could have done if the various branches had been separated instead of closely allied.

And best of all was the happiness of these boys as they hammered, soldered, spelled, drew, figured, studied, and sang. Their smiles, as they sang "We like our work just fine, Sirs," would put renewed courage into any staff of teachers and cause them to assert that the joy has not gone out of teaching.

We believe that our geography has been both practical and interpretative. (10) All interpretative knowledge is social in character, helping us to a fuller appreciation of human interdependence. From this knowledge of common purposes and interests, there should develop a broad spirit of neighborliness and friendship among all people. The right kind of geography teaching could be one of the strongest influences in the school and in life; in bringing about a condition of permanent peace.

(10) Bonser - The Elementary School Curriculum, p. 214.

Geography, history, literature, science, art, and
general, political and industrial, and as correlated
to the student that these things are really
the very and essential parts in the study of the world
could have been in the various branches and been
instead of closely allied.

And best of all was the happiness of these days
as they hurried, hurried, hurried, hurried, hurried,
and some. Their studies, as they went like the war with
them, they were hurried hurried hurried hurried hurried
teachers and came from to assist that the joy was not gone
out of teaching.

We believe that our geography has been with practical
and interesting. In all investigative knowledge is social
in character, and it is a better representation of human
interdependence. From this knowledge of common purpose and
interest, there should develop a broad spirit of neighborliness
and friendship among all people. The right kind of geography
teaching could be one of the strongest influences in the school
and in life. In bringing about a condition of peace and order.

SUMMARY

Since geography is the study of the earth as the home of man, it very naturally lends itself to a motivating subject around which many others may be correlated. It is an important subject because one can not read even the daily paper intelligently unless one knows geography.

Because geography deals with problems of the food, the shelter and the clothing of people, we chose commodities representing each of these human needs, and demonstrated that each made an interesting motivating element for a profitable unit of study which included history, hygiene, economics, science, mathematics, drawing, civics, literature, and spelling as well as geography.

We consider that the assembly hall exercises which the class gave after completing these various units of work were the best possible tests of how much and how well they had learned, because, in order to explain to others, a very thorough knowledge is essential.

SUMMARY

Since geography is the study of the earth and the
place of man, it very naturally lends itself to a scientific
subject matter which must of necessity be correlated. It is
an important subject because one can not read even the daily
paper intelligently unless one knows geography.

Modern geography deals with problems of the past,
the present and the future of people, the physical conditions
representing each of these human needs, and associated land
each with an interesting historical element for a profitable
study of study which includes history, science, economics,
politics, literature, religion, and
appealing as well as geography.

We consider that the necessity will continue when
the world has after centuries more nations with of which
were the most possible form of man with and now with they
and human, nature, in order to explain to others, a very
thorough knowledge is essential.

CHAPTER IV.

CORRELATION OF CLASS ROOM WORK WITH SHOP ACTIVITIES

There is no need of going into the importance of shops. The Junior High School has come to stay and Junior High Schools have shops. They will have more shops and better shops within the next few years. It is a great stride in our education in a democracy. (11) "Every girl and every boy should know what is involved in physical labor. It is not enough that they use such intellectual equipment as they have. We need in our society a better understanding and appreciation of the lot of the laborer. Boys and girls need to learn what it is to work." Many of our most prominent educators have discoursed on the value of shops. Shops and their values have become established facts.

My purpose in this chapter is to show the benefits of close correlation between shop activities and academic studies. No longer can teachers dismiss their classes to the domestic or manual arts teachers, heave a sigh of relief after they have filed in orderly fashion and feel no further responsibility. Now, the teacher keeps in close daily touch with the shop in order to make shop

(11) Strayer and Englehardt - The Classroom Teacher, p. 109.

THE PROBLEM OF THE FUTURE OF THE SCHOOLS

There is no need of going into the importance

of change. The Junior High School has come to stay and
Junior High Schools have changed. They will have more shops
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Boys and girls need to learn what it is to work. Many
of our most prominent educators have discussed the

value of shops. Shops and their value have become established
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THE PROBLEM OF THE FUTURE OF THE SCHOOLS

It is a question of the future of the schools and students
living. The Junior High School has changed their classes
to the extent of manual arts teachers, have a high
of relief after they have lived in ordinary fashion and
feel no longer responsible. Now, the teacher keeps
in close daily touch with the shop in order to make shop

and class room equally important parts of the child's school life. Surely, each has much to give the other.

It was our duty one year to make a survey of shops and shop problems in order to see how the junior high school mathematics could be correlated with the shops and motivated by them. We found that it could be done and is done.

Since the problems vary each year and in each activity, we can take type problems, only. However, we know that sometime during each year, similar problems will occur. Eight different activities: sheet metal work, carpentry, book-binding, printing, machine shop practice, electricity, painting, and auto mechanics are open to these boys. Correlation is, and always has been, the life-blood of mechanic arts schools. Our work was to assemble and direct the correlation so that as much as possible of the course could be closely linked with the shop.

No two activities offer an equal variety of correlating units or exactly the same kinds, but all offer many. In general, fraction work (both common and decimal) is required in all activities, also mensuration (linear, square and cubic), the making of bills and receipts and all

cases of percentage.

Because the boys are working with materials (as well as with figures) and because these materials cost money, it is necessary to estimate everything before beginning a job. Thus, estimating, so stressed in all new mathematics outlines, is an integral part of their work. Sometimes this is done on paper in the schoolroom and sometimes mentally in the shop. The same holds true of checking.

Since mechanical drawing is such an important part of their shop work, drawing to scale is absolutely necessary. This gives a splendid opportunity for fraction drill. When the more simple blue prints are used, the boys are taught to read them and to construct working drawings from them, using T square and rule; and later, the protractor. The shopman and the academic teacher correlate in this as in everything else. The drawings must be made (in many cases) before any actual construction begins, so there is no unnecessary delay in learning the simple facts about the use of the rule, compass and protractor. Every bit of this work in the shop is prepared for in the classroom. The correlation is very close.

Measuring in the shop must be accurate or the

work is spoiled -- actual work that they can see -- not just red or blue crosses on an incorrect arithmetic paper.

The use of the compass in the sheet metal shop, the wire gauge in the electrical shop, and the micrometer in the machine shop, furnishes an endless amount of drill problems and also checks up mistakes.

In the electrical shop, wiring furnishes all necessary motivation for linear measure, winding coils for cubic measure and radio work for linear, square and cubic measure.

Sheet-metal and book-binding offer boundless opportunities for square measure, while wood-working and machine shop offer more for cubic measure.

This is speaking in a very general way, of course. In the same manner, we say that the machine shop and electrical shop offer most work in radio, formulae and square root, while sheet-metal offers more in graphs and simple equations. It has, however, been proven that nearly always a year's work in any one shop has its own problems requiring these various branches.

Shop mathematics (as such) abound in formulae

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and equations. The tradesman follows these blindly and unquestioningly. We are not teaching trades. We are offering "try-out" courses to acquaint the boys with many trades, in order to help them to make an intelligent choice of a vocation.

So, we teach our boys shop mathematics on academic principles. We build simple formulae for them and help them to build simple formulae. We explain that many mathematicians have been years arriving at some of the more intricate formulae which they must accept and which they will find of great service in their work if followed intelligently.

This may all seem a bit vague. I shall illustrate by a few type problems, that is, problems arising in the regular routine of the shop and worked out in the arithmetic period in the classroom. One can see at a glance which parts of our mathematics courses were covered.

A certain woodworking instructor received a blue print and specifications for making tables for the Red Cross Society. The boys in that class returned to their classroom saying: "May we have some fractions?" No one is allowed to work on the tables until he can add

and subtract fractions in his head. Was not that sensing a need? Needless to say, they had a fraction drill.

They drew plans to scale, computed (and then measured) the amount of lumber needed, counted the hardware articles required, figured the cost of making the tables out of each of the five different kinds of lumber that might be used, figured the capacity of a crate needed to box three finished, folded tables and the amount of lumber needed to make the crate and the cost of shipping same.

They went to the department stores to price similar tables. Together with the shop man, they estimated overhead expense and so ascertained how much their labor was worth. They followed up this work on profit with percentage.

The machine shop requires the maximum of mathematics. Just one problem:

The boys made nut crackers and picks for each teacher in the building for Christmas, and had them nickel plated down town. They were pleased with their work and wished to know just how much they had cost.

It was necessary to find the volume of a

cylinder and of a rectangular solid, the weight of same, then the cost. The comparative cost of the steel with the entire cost of the article gave a chance for ratio work.

It is interesting to note that the steel for all cost only twenty-five cents, while the plating cost two dollars.

"Each thing in its place is best,
And what seems but idle show,
Strengthens and supports the rest."

Without the plating, the crackers would rust and look unsightly.

In electricity, the boys needed to know how many feet of wire were on a certain coil. Enter the formula! It had to be more or less blind following. The teacher spent many periods on simple formulae to lead up to the use of this one. To prove the efficacy of this formula, a boy unwound and measured the wire on the coil. This could not well be done every time. It was a proof for all time in this case. The boys were convinced of the value of formulae.

While in the throes of a copper project, the electrical shop boys brought in newspaper stock market

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reports. As was mentioned in a previous chapter, that was considered the ideal time to teach commission, as they were studying percentage, and because the boys asked, "What does it mean?" During the same project, the subject of "Duties" came up in connection with copper, co, "duties and taxes" were then studied in arithmetic. As their supplies were purchased at wholesale with a discount, that subject also was covered.

A sheet metal class, in a science project, decided that graphs were the things needed, so worked away on them, scarcely realizing that it was mathematics.

The boys in one school needed a large can in which to make sufficient cocoa for their class at luncheon. It was to hold three gallons. Those boys wrote to a sheet metal class asking if they would make such a can. The sheet metal boys were glad to do so. In order to make this, they had to find the lateral surface of a cylinder and the volume of that same figure. Square root and formulae were used and the work was checked. A bill for materials was made out later.

All this is really vital work. New work and drill work was correlated and motivated, therefore enjoyed.

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Our work does not proceed on the assumption that gruelling drill is "good for them", "mathematics is disciplinary", etc. Professor Ryerson, in a course at Boston University Summer School, said,- "Doing disagreeable deeds doesn't discipline doers." However, teaching our boys to do the hard task cheerfully because it is a step to help one in his life work, is real character building, which aim we must never forget in our schools. Neither correlation nor mathematics is an end in itself. Let us not lose our perspective. It is all a part of the whole. Unless our work and mathematics make both subjects more useful to our pupils and thereby makes them of more value to the world as useful citizens, we shall have failed. We believe that we will not fail.

By no means is mathematics the only subject correlated with shop activities. Geography is always linked with it. The boys wish to know the sources of the materials with which they work in the shops.

As the boys in the machine shop made their tools from various kinds of steel, we started our year's geography in that class with a study of iron, which naturally included the study of coal, limestone and steel.

The study of limestone brought in some interesting work on caves. We believe in bringing in all those interesting, picturesque side issues, because they hold the interest.

We confined our intensive study of iron to the United States, using England, Sweden and other countries chiefly for comparison; always finding those "comparative scales" in the back of the book of great assistance. We studied all the coal and iron regions of the United States and made maps of them, which is an excellent method of fixing locations in their minds.

They collected all kinds of iron: cast, pig, wrought, etc; all kinds of coal from lignite to anthracite, and so many varieties of steel that our exhibition table became crowded. Some of the specimens began to grow rusty, so we had a little science and developed the idea of tin and nickel plating. Here we dwelt a short time on the Ontario nickel mines and the English and Malay tin mines.

During our study of iron, we used the stereoptican views, steel pictures, of course, which gave us some excellent ideas about mining, smelting and especially about transportation.

The study of the human mind is one

of the most important in the history of science.

All those who have studied the human mind

have found it to be a most interesting

and complex subject, and one which

has attracted the attention of many of the

greatest minds of the world. It is a subject

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The Great Lakes loomed up large here, so we studied a little about their origin and a great deal about their commercial value.

It took a little time for the boys to decide why it was better to ship iron from Superior than to ship coal to it. Nearly every pupil could see immediately, however, why iron manufacturing cities had sprung up along the lakes, why lake steamers are built at Cleveland and farm implements in and near Chicago.

The great advantage of having coal, iron and limestone found near together as in Pittsburg and Birmingham, was really sensed by all. Transportation as a factor in commerce showed them why only small articles of metal (as a rule) are manufactured in New England, and the huge, bulky things along the lake shores.

It was interesting to watch their faces as they thought out these things for themselves and gave their opinions, backed up by reasons, always, fearlessly, perhaps for the first time in their lives. These boys could reason well, but perhaps could not express their thoughts as glibly as some of their classmates in the other schools from which they had come. Perhaps they had

not wanted to do so. Evidently, many of them had not been encouraged to do it. However, they could and did do it when they had a motive which they sensed, i. e., a desire for an intelligent understanding of the materials with which they fashioned the many useful and necessary articles in the shop.

Incidentally, of course, the making of coke came in here, and its importance as a by-product. The study of forging came in, too; which brought up the discussion of the old time smelting and forging by the use of charcoal.

It would be easy to write a chapter on their study of coal and iron alone but that, after all, was just one small part of our correlation.

The boys oiled their machines before using, while in use and after using. They also used oil on their cutting tools. They knew that this was to prevent heating by friction, which brought in a little science, but in no way trespassed on geography.

This was our chance to teach oil and oil regions; which, to be sure, had been mentioned in connection with our study of coal and iron regions. Many pupils were

greatly surprised to realize that gasoline, kerosene and vaseline all came from petroleum. They read everything they could find about its history and were delighted with the stories of men selling their farms because the cattle would not drink the "polluted" water, only to realize that the buyer became a rich man from his oil wells.

The mention of its use first as a medicine reminded them of the fact that their grandmothers had believed kerosene to be a remedy for many things.

The boys wrote to the Standard Oil Company for one of their exhibits of oil, which, when received, gave an added impetus to their work. So, hygiene and English entered quite naturally.

The shop instructor showed them which kind of oil was generally used on the machines and why. He explained the reasons why a more refined oil had to be used on the cutting tools, a question, he said, that he had never heard boys ask before. He assured us that all this work helped, not hindered, the boys' shop work; so everything seemed to be going the right way.

The nut-crackers which the boys made in the shop proved to have most interesting geographic connections.

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They found and located all the countries that produced nuts in quantity. They studied irrigation in connection with the almond and other nut growing regions of California. They studied about the people of other lands who make meal out of nuts. They found that nothing save palm nuts will produce the kind of smoke desired by the rubber curers of Brazil. They made a collection of nuts and found that peanuts are an important article of commerce. By sending for a peanut butter exhibit they found how and where peanuts are planted, harvested and marketed and all about the manufacture of peanut butter which made a start on the study of the commercial value of vegetable oils.

As is to be expected, their correlation often led them off the beaten track, but that is where adventure lay. One might wonder why nut-crackers took them to Turkey. These utensils had to be polished with emery cloth. The study of emery, emery paper, emery cloth, and emery wheels took them to Asia Minor and especially to Turkey for the emery.

Time would not permit them to study this region thoroughly, but, by the aid of steamship folders and Chamber of Commerce material, we found the routes and the exchange cargoes from the United States to these ports in the near East.

The wood-working shop always furnishes worth while correlating problems. During the reconstruction period of post war days in France, our wood-working shop received a Red Cross order for one hundred dining room tables of ash for the returning refugee families in the devastated regions of northern France and Belgium. It seemed a tremendous task for boys to do well but all who saw the tables agreed that the order had been amply filled both as to quality and quantity.

The study of the specifications, the explanations of the plans, and the construction of the tables were the shop problem; ours was to correlate our academic work with it to make one big unit of work.

Besides the tables, the boys made the crates in which the tables and chairs (constructed in another wood-working shop) were shipped. The measuring of the lumber called for constant addition and subtraction and, in some cases, multiplication of mixed numbers. The older boys could do this, so were put in charge of groups of smaller boys. When these realized that they could not really be "on the job" until they could figure more quickly and accurately, they asked for fraction drill in the classroom. Needless to say, they received it.

The word "word" is a very common word in English. It is used in many different ways. For example, it can be used to describe a single letter or a group of letters. It can also be used to describe a single syllable or a group of syllables. In fact, the word "word" is used in so many different ways that it is almost impossible to define it. This is why it is so important to understand the word "word" in its many different uses.

The word "word" is also used in many different contexts. For example, it is used in the context of grammar, where it is used to describe the building blocks of a sentence. It is also used in the context of linguistics, where it is used to describe the smallest units of meaning in a language. In fact, the word "word" is used in so many different contexts that it is almost impossible to define it.

Another word that is often used in the context of grammar is "morpheme". A morpheme is the smallest unit of meaning in a language. It can be a single letter or a group of letters. It can also be a single syllable or a group of syllables. In fact, a morpheme is the smallest unit of meaning in a language, and it is used in so many different contexts that it is almost impossible to define it.

Next came examples of buying lumber (per M) by the thousand, work on board measure, and drill on computing the cost of labor and of shipping. They covered sheets of paper with figures, right cheerfully, in order to ascertain the cost of one table, including lumber, screws, washers, nuts (the legs were so made as to fold into grooves, for convenience in shipping), glue, paint, and an estimated overhead expense.

This made our next arithmetic problem one of profit and loss. The boys figured the retailer's profit on tables, after they had priced such tables in furniture stores and compared that price with their estimate of the cost of the tables. Profit and loss and general percentage were the next logical steps. They really desired to know these facts as they helped to solve an actual problem.

When the crates were being made it was necessary to construct them of such a size as would hold two tables and six chairs. This necessitated more arithmetic, especially work on cubic measure, in order to find volume and capacity. Here, we had to refer to our text for the rules which mathematicians have given us. We realized then, that our course of study is, more or less, the heritage of the race and that at some time or other, we do need most of its

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contents, but that that time of need is the proper time to teach it.

The new words for spelling were of sufficient number to form a new minimum list. A few are: lumber, tapered, brace, dowels, materials, shellac, Belgium, Havre, crating, refugee, required, industry and devastated. As they were using these words constantly in the shop, in the yard and in the classroom, they became familiar with their meanings and pronunciations, so that the spelling remained only a visualizing process, quickly and easily mastered.

The course of study in literature and composition might well have been planned with our work in view, so well did we find that our work tallied with it. "The Night Before Waterloo" and "How They Brought the Good News", as well as "Flanders Field" and a few more of those stirring, gripping, worthwhile poems were studied and extracts learned.

Many stories were read, some for study and some for recreation. Among these were: "Stories of Old France", "The Belgian Twins", extracts from stories of Lafayette or Jeanne D' Arc, and from "Over the Top". We wish our boys to become aware of the life-giving content of literature, so we aim to teach them to enjoy the reading of fine prose and poetry.

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Our written composition was, for the most part, as natural and as necessary as the correspondence of any business firm. The boys wrote to paint and lumber concerns asking for circulars. They wrote to the National Forester at Washington asking for a lumber exhibit and for forest pictures. When the pictures came, all in good order, they informed the Forester of this fact by another letter; thus getting lessons in courtesy and business practice. They also wrote letters to paper concerns asking for exhibits and circulars.

These letters were helpful to them in the solution of their problems so were real and vital to them. The forest pictures furnished countless topics for compositions, such as: "The Ranger", "Camping in Colorado", "Boy Scouts on Mount Washington", "Trout Fishing", "A Tennessee School" and "Ten Thousand Miles in a Ford".

The pupils wrote descriptions of the tables, an exposition of the tables, and many war anecdotes of French, Belgian, and American origin, thus covering nearly every phase of our curriculum. We had oral compositions on all these subjects and then more. All this furnished a superabundant amount of corrective work and grammar, in order that they might do better next time and that they might get their stories into the school paper. Thus their writing

was a real experience, not an imposed task.

Since (12) "Geography is of use to us as it explains and interprets the conditions of life", we endeavored to make it useful.

We studied the lumber regions of the United States, the different woods, the forest products of each region and the various methods used in various places.

We had rather an intensive study of lumber in New England, noting in particular the lumber manufacturing cities, which brought up the subject of water power, physical features, glacial action, etc., and the lumber ports, of which Boston is the most important. Here we paused to study the manufacture of paper (from wood pulp) without which no study of lumber is complete. We decided that our tables would be shipped from Boston, probably to Havre on to Antwerp, so we looked up these seaports and the shipping routes.

Very naturally the question arose as to why France and Belgium must send to us for tables. We studied our texts for material about the forests and industries in these countries before the war and in new magazines and texts for information about forest conditions now in those countries.

(12) Wilson - Motivation of School Work, p. 150.

was a real experience, but an unpleasant one.

While the experience is not as bad as it might be, and interests the children of life, we have never seen it before.

We found the lower region of the United States, the different roads, and several hundreds of miles from the various points of view in various places.

We had rather an interesting study of the lower region, noting in particular the lower part of the river, which brought up the subject of water power, physical features, climate, etc., and the lower part of the river as the great highway, and as a means to reach the great heart of the world (the river) without which no study of the river is complete. We found that our father would be surprised from Boston, probably to have one to Boston, as he would be there tonight and the following morning.

Very honestly, the question arose as to why France and Belgium were not in the league. We found one reason for this, and the others, and the others, these countries before the war and in our opinion, and for information about France, and the others, and the others.

About this time there entered into the whole affair a spirit not in our outline: we may call it civics, the joy of sharing, democracy, or the Christian charity: it was all these and more; and it made them and their work finer than either would have been without it.

In studying the forest pictures, the boys became greatly interested in the turpentine industry of the South. The fact that turpentine came from the trees, was distilled, refined, barrelled, shipped, and then made use of again in paints as a finish for the same kind of wood, perhaps, as that from which it came, seemed to them a very wonderful illustration of one of nature's cycles. The value and many uses of rosin were also brought out. They were very much interested in the Vermont forests and the maple sugar industry, and referred to that later in their study of sugar.

The idea of the many uses of the forests was borne in upon them; recreation of all kinds: tramping, camping, fishing, hunting, scenery, and automobiling, sources of drinking water for cities, sources of water for irrigation, natural reservoirs and regulators of rain water and as sources of tannic acid, which later fitted into our study of the shoe and leather industry.

The pictures and study of the forests of the

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Pacific Coast were a delight to them and, as to us all, a source of wonder and admiration; and seemed to them to fit well into the scheme of things, when they found that this timber was used for props, beams and roofing of all western mines.

In our history, we reviewed French explorers, the French aid in our Revolution and the World War. We thought it worth while to delve just a little way into the story of European conflicts of other days and to dwell somewhat on the French Revolutions, the Franco-Prussian War and Belgium's fate as the "Battle Ground of Europe".

In hygiene, we discovered the importance of pure water and sanitary conditions at all times and especially in war. The mortality, the illness, and the inconvenience that the lack of these caused our soldiers, was discussed. Ventilation in the shop was insisted upon by the boys. The cutting of a finger gave an opportunity for a first-aid demonstration. The necessity for sterilizing a wound before dressing was impressed on the boys.

All our drawing here was closely linked with our shop work. The boys drew pictures of trees, of tables and of their tools and also copied many of the forest pictures.

In all this work, the boys were doing regular grade work in their classroom, but, because it was so related to their shop work, it was a natural proceeding and a part of their lives.

SEWING BASKETS

Now that we have girls as well as boys in our mechanic arts classes in junior high schools, we get still another impetus and another contact in our correlation.

The pupils decided that they would like to make Christmas gifts for their mothers, so, after the committees had looked in the stores and discussed the matter, they decided on sewing baskets. Here was a good project and they embarked upon it with a will. The pretty folding sewing baskets were certainly appreciated by the mothers. Each boy agreed to make two of the little wooden stands and each girl agreed to make the cretonne bag part with its pockets and its pin cushion. That part, was done in their shops.

They figured the cost of the wood, stain, glue and dowel pins, all of which came to \$.28 for each basket. The cloth cost from \$.14 to \$1.25 according to quality and according to whether they were lined or unlined. Most of

In all this work, the boys were the workers

made work in their classrooms, but, because it was so
related to their own work, it was a decided success and
and a part of their lives.

THE RESULTS

Now that we have made an effort to make the

workmen's work easier in their own schools, we are left with
another problem and another chapter in our development.

The pupils' decision that they would like to be
observers with the boys' work, at first the teachers
had looked in the matter and decided for a better, they
had not in seeing results. They were a good school and
they wanted more to do with it. The pupils' feeling
active interest was certainly suggested by the fact that
they had agreed to give the of the little school a new
and they agreed to make the children's work and the
teachers and the old children. They were a good school.

They thought the work of the school, what, this
and most other, all on their own. It was for their benefit.
The school was now a little more as a school and
satisfied to know that they were doing the right work.

them had the kind that cost \$.14 for material. When they added \$.28 for the cost of the stands, the total cost was \$.42. The sample basket, which was their model in making these baskets, cost \$4.00 down town. They began to realize that labor is worth a great deal.

A little lesson in the fitness of things was not amiss here. Many of the mothers wished to keep these baskets in the kitchen for convenience. That meant that they would become soiled. So, it was more sensible as well as cheaper, to make the unlined baskets and to use gingham, so that the cloth part could be slipped off easily and laundered with very little work.

In making these baskets, the girls found that they required many stitches. They wondered how people ever sewed without sewing machines. This, of course, introduced Elias Howe and his invention. They were pleased to discover that most of our labor-saving devices were invented by Americans. The sewing machine was no exception.

Thomas Hood's poem "The Song of the Shirt" gives a very vivid picture of the drudgery of hand sewing.

"With fingers weary and worn,
With eyelids heavy and red."

seemed to give them a realization of the time and eyestrain

and weariness required for the countless stitches when all sewing was done by hand.

Elias Howe's life story told them quite plainly the struggle of the poor working man to support a family. It also gave them a splendid lesson in perseverance.

Another very interesting feature of the storey of his struggle is the fact that the factory workers, fearing that the machines would deprive them of work, destroyed those that were installed in a certain factory. There has always been that fear in industry. However, the value of the machine soon justified its existence and Howe became a rich man.

When the pretty baskets were finished with their two pockets, pin cushions and their spool racks, the practical arts department was consulted in regard to the proper equipment for a sewing basket in a well regulated family. They ascertained that the following is a list of the proper fittings: a pair of ordinary sharp scissors, a pair of button-hole scissors, a tape measure, a package of assorted needles, a thimble, an emery bag, a pin cushion, a paper of pins, several spools of thread, a tracing wheel and a piece of tailors' chalk.

Both girls and boys became interested in this equipment, and wished to know something about the various articles in the basket.

They wondered why the tape measure had metal binders at each end. They found that they were bound with metal so that they would not fray and thereby cause measurements to be incorrect. People used to measure with their aprons, or with their arms, which may have been all right for rough measurements but for accurate measurements of cloth, the tape measure is the proper utensil. One of our greatest architects says that accurate measurement is the foundation of every great construction and that such accuracy requires skill to make and to follow. Any dressmaker will agree to that statement in her work, too. So, the tape measure with the metal binders is necessary in the sewing basket.

Would you expect to find science in a sewing basket? It is ~~h~~here. The common utensil, the scissors illustrates a lever of the first class. The fulchrum is in the center. If you tried to grind those scissors, you would see sparks fly, due to friction. A good mechanic can judge the quality of steel in a pair of scissors by the sparks. The very finest scissors are made in Sheffield,

England out of Swedish iron with the British import especially for fine cutlery.

The little emery bags, used to polish needles, started them on another line of thought. They decided that emery must be very hard to polish needles which are made of steel. They found that this emery is quite different from the emery cloth used in machine shops. This is made from the same ore or clay that aluminum is made. The most common kind is bauxite ore, which is found in large quantities in many places in the world. Our own country has an abundance of it. It is melted and fused, and often sapphires and other precious stones are found in the by-products.

As they gathered buttons to put in the pocket of this basket, they found a wealth of geography and history connected with it. (13) The Savages held their clothes together with strings, the Greeks and Romans had girdles and it was not until the Middle Ages that the button appeared. It was first used as an ornament.

The trade of button making began in Queen

(13) Carpenter - How the World is Clothed, p. 317.

Elizabeth's time. The first button factory in our country was built in Waterbury, Connecticut, where tin and pewter buttons were cast. Buttons are now made of metal, of hoofs, horns and bones of animals, of pearl and mussel shells, of elephants' tusks, of vegetable gums, of glass and porcelain, of blood, paper, cloth, skimmed milk, seaweed and of celluloid. The very finest pearl buttons come from the pearl oyster shells, taken from the sea near Thursday Island. The buttons turned out of the factories of America annually, sell for millions of dollars and besides these, we import several million dollars worth more from Europe.

And pins, what of them? Well -

"Pins and needles, needles and pins,

When a man marries his trouble begins."

is not a verse from Dorothy Dix but one from Mother Goose. Evidently neither pins nor marital troubles are twentieth century institutions.

We have read much in our history about the tax on tea in the list of causes leading up to the Revolutionary War. As a matter of fact, pins were among the articles which caused much of the trouble and the colonial dames missed them, even as they missed their tea, although their

patriotism impelled the sacrifice.

The boys were pleased with this little story: In the year 1776, a boy playing on the banks of the Hudson River, gathered pockets full of thorns, ran home and slipped them into the hands of his mother who was talking with Benjamin Franklin. When this distinguished caller asked the boy what they were and found out that they were long thorns, used as pins to fasten clothes, he asked for some to take to France whence he was embarking on a diplomatic mission. He said, "I will take them with me and show that a nation that grows its own pins can never be conquered."

Pins and needles and scissors all made points of interest to boys as well as to girls, as the entire class worked on Christmas gifts for their mothers.

Certainly this was along the line of worthy home membership; girls and boys merging their interests and playing and working together as the Lord intended they should.

referred to as the "Black Book"

The following is a list of the names of the

In the year 1940, a list of names was compiled in the
which included the names of all of the persons who were
known to the author of this book at that time. This list
was compiled for the purpose of identifying the persons who
were known to the author of this book at that time. It is
not intended to be a complete list of all the persons who
were known to the author of this book at that time. It is
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SUMMARY

Because the shops in junior high schools are for exploration and not to teach trades, they lose much of their real value unless closely correlated with the academic work. Looking at it from the opposite point of view; the academic teacher who does not utilize the rich possibilities of the shop to motivate her classroom work, is certainly neglectful of a splendid opportunity for appealing to adolescent boys and girls.

Every effort that we make to enable pupils to understand the necessity and the value of manual labor is a step toward better civic understandings. Every tie-up that we make between shop work and academic work, I believe, will tend to narrow the gap of misunderstanding between capital and labor and will make for a full life for the individual.

CHAPTER V.VOCATIONAL GUIDANCE

When we speak of vocational guidance in the schools, we mean a system of helping pupils understand many different occupations in order that they may choose one wisely.

We wish, of course, to prepare each pupil as intelligently as possible for his life work. This is a benefit not only to him but also to the community as every citizen who is happy in his work is an asset to the nation, just as the incompetent, dissatisfied one is a danger.

There is great need for better vocational guidance. We have too many square pegs in round holes because pupils have left school so frequently without any training for any occupation. This fact led to the investigating of the causes for leaving school. *14) Contrary to the rather generally accepted idea, the real reason was rarely that of economic pressure at home. Usually it was because their needs were not satisfied; they did not like school.

*14) John Brewer - The Vocational Guidance Movement, P. 180.

THE VOCATIONAL FIELD

When we speak of vocational training in the schools we mean a system of training which is designed to prepare the individual for the work of his life. It is a system of training which is designed to prepare the individual for the work of his life. It is a system of training which is designed to prepare the individual for the work of his life.

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There is a great deal of talk about vocational training. It is a system of training which is designed to prepare the individual for the work of his life. It is a system of training which is designed to prepare the individual for the work of his life. It is a system of training which is designed to prepare the individual for the work of his life. It is a system of training which is designed to prepare the individual for the work of his life. It is a system of training which is designed to prepare the individual for the work of his life.

The result was, of course, that, untrained for any special work, they had to take a job. Boys and girls of the adolescent age wish to earn money, so they take a job for a few dollars a week, which, looms large to them. However, it is probably a job that no man would take. There is no promotion; the boy leaves; he has learned little and has improved little. There is loss to the employer, who must break in a new boy. This is all waste. What can the junior high schools do? They can guide the pupils, and cause the opening of their eyes to opportunities, stress the value of work, the need of good workmanship, emphasize the great numbers of occupations and give the pupils a chance to try out a few of them.

When all the fads and fancies of modern education shall have passed away, there will still remain with us the ever present need of fitting our pupils for their life work.

How can one make a sensible choice of occupation unless one knows something about *many*? There must be a broad foundation for vocational decisions.

Children, in their games, imitate the doctor, the plumber, the carpenter or whomever the last visitor happened to be.

So, with the little ones, it is an easy matter, through dramatization and story telling to build foundations for vocational guidance.

Educational and vocational guidance is fast becoming a vital part of our every day work in public schools; in fact it is a part of every Junior High School system. Surely, nothing can be more important than opening the eyes of our boys and girls to their responsibilities and opportunities in order that they may fit themselves for both.

The leaders in this movement are urging us to teach our hygiene so as to show the health requirements of the various occupations and the effect of various kinds of work on the health of the worker; our history by the history of inventions and occupations; our geography in terms of the workers of each country, and our literature with reference to the necessity, the dignity, and the beauty of labor.

Our curriculum offers almost limitless opportunities for occupational and vocational development and in this way can we connect our work with that of the world into which our pupils plunge in so short a time. The following is an example furnished by hygiene.

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A HYGIENE LESSON.

Our hygiene lesson recently was on the necessity of a pure water supply in order to avoid typhoid fever and other diseases.

The class had little interest in this vital subject and less knowledge of the source of the water supply beyond the faucets in their homes. We talked of wells, pumps, ponds and rivers as they were utilized in years past for water and the reasons why wells are so little used now. The idea of bringing water in pipes from clear mountain streams was talked about and a little interest awakened; then still more when someone referred to the Roman aqueducts.

It was suggested that, for ~~the next~~ lesson, the pupils look up the history of water supplies. They were fairly bursting with enthusiasm at the next lesson.

Some had gone back to Bible times, some to Roman aqueducts and some to the running water near which the early American colonists always founded their towns. Some, aided by civil-engineer relatives, made sketches and explained the Panama conditions and told how the government met them.

A SIMPLE LIFE

It is a simple life, a life of peace and quiet, a life of simplicity and contentment. It is a life that is not complicated by the cares and worries of the world, but is a life that is filled with the joys of nature and the love of family.

The simple life is a life that is not complicated by the cares and worries of the world, but is a life that is filled with the joys of nature and the love of family. It is a life that is not complicated by the cares and worries of the world, but is a life that is filled with the joys of nature and the love of family. It is a life that is not complicated by the cares and worries of the world, but is a life that is filled with the joys of nature and the love of family.

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One, whose father was a water commissioner, gave some very interesting information on costs, meters and filtration. All were impressed by the importance of its water supply to an army.

To be sure, we had science, history, geography, civics, hygiene and vocational guidance allied in our problem, but even as this, are the problems of life.

Not for a moment do I think this little experiment will make surveyors, doctors, or sanitary engineers of the members of my class; but I know that it proved to them the dependence of each on the other and opened their eyes to the place of each in the scheme of life.

They all realized that, since so much time, money and brain power were expended on the project of water supply, it must be an important one. They also saw that they could not escape their share in it, as they must use the water and must pay a water tax directly or indirectly. All this is vocational enlightenment, which is the path to vocational guidance.

Teachers everywhere are now so keenly alive to the necessity for vocational guidance in our schools that many

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of them are burdened with regrets, thinking of all the children whom they might have helped to guide but did not.

After some study into the subject and a few surveys, it appears that, unintentionally and without system, they have contributed to vocational guidance, and so may be reassured. A survey was made in one small town where the schools are excellent, the outline elastic and the authorities broad-minded so that, as a result, the teachers have none of the unnecessary minute measuring or originality smothering pressure or inhuman efficiency systems that prevail in some larger places.

To be sure, these recently discovered vocational training attempts were accidental, and always done in the cause of science or language or geography or gardening, but that further emphasizes the fact that vocational *guidance* is closely correlated with the school subjects. The following is a partial list of these correlated vocational enlightenment sojourns.

A first grade was taken to a pond, to see men cut ice for a science lesson; and to the blacksmith's shop, so that they might understand the pictures in "The Village Blacksmith".

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A fourth grade was taken to a sawmill to illustrate a lesson on lumbering. This, of course, was in the name of geography.

Most of the experiments were with seventh and eighth grades, however. Pupils of these grades were taken to visit a shoe factory in which they saw the shoes being made, step by step. The owner of this factory invited the class to spend an afternoon on his model farm and in his model dairy. This was geography and gardening and sanitation.

Another day, the class visited a small woolen mill and again a machine shop, then a garage.

One fond parent made them welcome at his printing establishment in the near-by city. Here each child was given a page that he actually saw printed. The setting up of type, folding of paper, and other processes were done before his very eyes.

Before each of these trips, the teacher studied the subject and told the class to look for certain things. Afterwards, they talked over the trips, compared notes, corrected any false notions and stressed the important points. In every case an overseer or the owner explained things and answered questions.

1. The first part of the report is devoted to a general survey of the situation in the country. It is a very interesting and informative study of the country's development and progress.

2. The second part of the report is devoted to a detailed study of the country's economic situation. It is a very thorough and comprehensive study of the country's economic development and progress.

3. The third part of the report is devoted to a detailed study of the country's social situation. It is a very thorough and comprehensive study of the country's social development and progress.

4. The fourth part of the report is devoted to a detailed study of the country's political situation. It is a very thorough and comprehensive study of the country's political development and progress.

This little divergence has been for the purpose of cheering the teachers, because, if, accidentally and unintentionally they have been doing some of this vocational guidance work (even though it has been haphazard and unsystematic), surely now, with a broader understanding of the need of it and the almost boundless opportunities for it, they can make an intelligent, worth-while attack on the problem.

Surely, it has been proven by the fact that they were instructing and guiding their pupils in vocations without realizing it, that it is not an added burden to the already over-worked teacher, but that it is and always has been a vital part of our work.

Many of our ablest educators are urging us to look for all these contacts between our curriculum and vocational enlightenment as an avenue of approach to the more definite work carried on by the vocational counsellor who now has a place in nearly every junior high and senior high school throughout the country.

These educators claim that literature is always a source of countless opportunities for vocational awareness. We have been told that we can scarcely read a page

It is a very common mistake to suppose that the
of the mind is a mere collection of ideas. In fact,
the mind is a power which can create new ideas
and can also destroy old ones. It is a power which
can be trained and improved by the use of
the right methods. The mind is a power which
can be used for good or for evil, and it is
the duty of every man to use it for the
benefit of his fellow-men.

The mind is a power which can be trained and improved
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of literature without finding some reference to the necessity, the nobility or the dignity of labor. A certain class happened to be reading "Robinson Crusoe" when the teacher heard the above statement and decided to put it to the test.

VOCATIONAL OPPORTUNITIES IN TEACHING ROBINSON CRUSOE.

This book may seem a little unusual for a concrete example of a story affording opportunities for teaching anything of value vocationally.

However, as four members of the class took turns reading it to the others, they found repeated evidences that Crusoe became a Jack-of-all-trades and that his development of each occupation arose from his immediate needs. Crusoe's problem was unique in that there was no question of interdependence; he had to do everything for himself.

It was easy to show that his comfort, his safety, his very life, in fact, depended on his ability to build, to plant, to fortify, to hunt, to make pottery and to perform the countless other occupations necessary for the maintenance of his life.

To be sure, our children do not live on desert islands

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MEMORANDUM FOR THE RECORD

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but our Boy Scout and Camp Fire Girls expeditions aim to teach many of the things that he learned by repeated attempts and after many failures.

While this instance may seem far-fetched, it is worthy of mention because the pupils themselves seemed to sense the all-importance (to him) of Crusoe's occupations, his lack of preparation for them at that time, and his improvement along most lines, with persistence.

It showed that even in the simplest life conditions human beings must have food, shelter and clothing and that most occupations have to do more or less directly with these needs.

This leads quite naturally to an experiment in correlating geography with vocational awareness.

RELATING GEOGRAPHY TO VOCATIONAL GUIDANCE.

Since the study of surface, climate, resources and industries of a country is valuable to us only as we learn how they affect the people of that country and of the world, one class learned its geography by way of the occupations of the people of each country. The class was divided into groups to represent the workers in the chief occu-

pations of each country; for instance; farmers, lumbermen and fishermen in Canada; ranchers, farmers and miners in Australia, or tulip growers, dairymen and tile manufacturers in Holland.

One group always represented the wholesale merchants or business men. Then one person was chosen from each group to form a Board of Trade or Finance Committee, whose duty it was to look into and solve, as well as possible, the problems and difficulties brought them by the representatives of the different occupations.

Each group of workers thought up its own problems many of them based on articles from newspapers or magazines. One person took the problem to the committee, whose members consulted with him about it. They were free to consult encyclopedias, geographies, and magazines, or to call on the teacher if in doubt. When they had settled the difficulty, the representative reported to his group, and, if they agreed, the matter was settled and an agreement drawn up and signed; if they did not agree to the terms, further consulting was necessary.

Much of the work was done before and after school which proved that the pupils were enthusiastic because this

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outside work was not required. The problems to be discussed were always stated to the class and the final report was always read to the entire class. The teacher and the class then made suggestions and gave the Finance Committee better ideas for the next time. Every member of the class served on this committee at some time and also did his share in his own group.

This work showed the pupils plainly the interdependence of people in the various occupations, countries and sections of countries, one on another. They saw how transportation companies depended on labor and fuel, while the farmers and miners had to ship their goods if they were to prosper; that a strike in the Pennsylvania coal mines may so increase the price of coal that there is no money for their new clothes. It was borne in on their minds that we depend on the workers in China for tea and that we depend largely on foreign potash fields for our fertilizer, without which our crops suffer. They saw that exporters depend on manufacturers and railroads; they, in turn, on miners and laborers, and all depend on the farmer for food, and if they fail a country, as they did in Russia, starvation follows for the masses.

This work also developed the idea that, much less than formerly, is man controlled by his natural environment,

but on the contrary, that people can improve and control, to a large extent, the natural conditions of a country. They saw that man's industry and knowledge of science have conquered many of the obstacles once thought insurmountable, for they know that the people of New Orleans now have ice in their refrigerators, the people of Montreal enjoy tropical fruit in winter; Belgian towns, far inland in Africa boast electric lights and telephones; the old malarial swamps of Panama have been made so sanitary that the death rate there is perhaps the lowest in the world, while the deserts of Southern California, by the aid of irrigation, have blossomed into a veritable fairyland. Surely these miracles testify to the work of the people of many climes, and show that there must be that interchange of ideas, of products and of workers, between countries if the world is to progress. These are a few of their many problems which aided them in developing these ideas:

I. BROUGHT BY THE TRAPPERS OF CANADA.

"The Canadian law forbids the trapping of foxes and muskrats. As these skins are very valuable to us, will you help us?" The Board had the law changed to read: "Muskrats and foxes may be trapped for two months only, in each year for six years, in which time a new breed will have sprung up. The law shall decide which months each year." An agreement was drawn up to this effect and duly signed.

II. BROUGHT BY THE FARMERS OF CANADA.

"Our soil has become impoverished. The whole-salers complain that our wheat is poor. We sent for an expert to prove this. He says that the soil requires an expensive kind of fertilizer which we cannot afford, taxed as we are for the late war." The committee considered the farmers' lands good security, so provided the fertilizer. An agreement was signed by each farmer to pay the Finance Committee stated amounts at regular intervals.

III. BROUGHT BY CANADIAN LUMBERMEN.

"We work more hours a day and do harder work for less pay than men in other occupations. We will strike unless we get a six hour day at \$10.00 a day." The lumber company said that they could not afford this, and that an eight hour day was short enough. After three stormy sessions they agreed on a six hour day at \$1.25 an hour.

IV. BROUGHT BY ITALIAN IMPORTERS.

"Our business is being greatly undermined by smugglers. Unless something is done very soon, we will be ruined." The committee and government officials promptly doubled the coast guard and had a new seal cast, without the stamp of which, no goods could pass.

II. THE HISTORY OF THE UNITED STATES

The history of the United States is a story of growth and change. It begins with the first settlers, who came to the continent in search of a new life. They found a land of opportunity, but also of hardship. The early years were marked by conflict and struggle, as the colonies fought for their independence from Britain. The American Revolution was a turning point in the nation's history, leading to the birth of a new country. The years following the Revolution were a time of rapid growth and expansion. The United States became a major power in the world, and its influence spread across the globe. The Civil War was a major event in the nation's history, leading to the abolition of slavery and the strengthening of the Union. The years following the Civil War were a time of rapid growth and expansion. The United States became a major power in the world, and its influence spread across the globe. The years following the Civil War were a time of rapid growth and expansion. The United States became a major power in the world, and its influence spread across the globe.

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V. BROUGHT BY SPANISH RAILROAD COMPANY.

"We wish to build new roads to connect the various cities of Spain. Will you help us in getting the consent of the government and in procuring laborers?" This took a good deal of time and thought, as many obstacles were met. Finally, however, they received the consent of the government for a 99 year franchise, provided at least one train a day (barring great storms) ran over each road. They imported ten thousand Italian laborers, after promising the Italian government that they should receive the same rights and wages as the Spanish laborers. This agreement was duly signed.

They endeavored not to outrage any laws in their many problems but, of course, could not go into the fine points of law in each country. They made many funny mistakes, but learned by them, as when they thought that the miners of India should get \$10.00 a day instead of the mere pittance they do receive, and when they thought that fertilizer cost \$5.00 a ton instead of many times as much.

They learned that strikes cannot be settled merely by raising wages, that people cannot borrow money without security, that laws can be changed if a sufficient number of

I. THE STATE OF THE UNION

The report of the President to Congress is a most interesting and valuable document. It contains a full and complete statement of the condition of the country at the close of the year. It is a document which every citizen should read, and which every citizen should understand. It is a document which should be read and understood by every citizen, and which should be read and understood by every citizen.

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voters wish it and make known that wish, that contracts have to be written, signed and witnessed to be binding, and that arbitration takes time.

It is obvious to everyone that all problems cannot be solved so easily in real life, but they do know now some of the problems of the workers in the various lands. They learned geography, were enlightened vocationally, and had a fine time in the process.

We have stressed vocational guidance as a part of many of our projects or units of work. When we were making the tables ordered by the Red Cross we found opportunities for this work.

We stressed the dangers of a lumberman's life with its constant exposure to cold and wet; the pleasures if offered, such as the free out-of-door life, and the fitness of a man for it. We decided that he needed good health, nerves, and a sense of good sportsmanship.

Next came the study of men in sawmills; the dangers, wages, health condition and chances of advancement. This naturally led to a study of carpenters and cabinet makers; their

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qualifications, hours, and wages; all of which is vital knowledge for wood-working boys.

Let it be remembered, however, that we are not trying to make carpenters out of these pupils; we are endeavoring to give them an understanding and an appreciation of this particular kind of work and then pass on to another.

All this leads us to our "try-out" courses which are offered in every well-regulated Junior High School.*⁽¹⁵⁾ We live in an industrial age, and whether our pupils become mechanics, politicians, or professional people, they need, in order to be good citizens and well developed adults, to have a general knowledge of the more important industries. Whether producer or consumer, no one is independent of industry. Many of our laws, much of our politics and certainly, a great part of our comfort is concerned with modern industry and its great problems.

So much has been written about these shops for "try-out" courses that many people have the idea that vocational guidance begins and ends there. That is not true. These courses are very important but are only a part of the whole plan of

*⁽¹⁵⁾ Myers - The Problem of Vocational Guidance, p. 52.

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guidance. In fact, unless properly managed, these very shops can be as deadly as some class rooms. There must be awakened interests, live teachers and close contacts with life, if the full value is to be gained from these "try-out" courses.

The popular courses at present are cooking and sewing for girls, electricity, tool-making, carpentry, sheet metal and printing for boys. As the need arises and finance permits, more courses of this kind will be added, we all believe. So much has been said about the value of this shop work in previous chapters, that it need not be repeated here.

The placement bureaus and the continuation schools are doing a fine piece of work too, but that is quite outside our province.

Our vocational counsellors are endeavoring to connect the school with these and other agencies. Each Junior High School has one or more counsellors, whose duty it is to advise the pupils regarding a choice of an occupation. In order to do this, the counsellor must know the pupil's aptitudes, training and disposition as well as knowing the qualifications needed in the various occupations.

Despite counsellors and "try-out" courses, some boys and girls will slip away from school unfit for any occupation. We know that. The millenium has not arrived. Our job is to make that number smaller each year.

Really, the big problem of the junior high school teacher and counsellor is to build broad foundations, to discover aptitudes and to guide wisely toward a choice of high schools and of extra-curricula activities.

It is important, in all this work, to teach our boys and girls the principles and practice of cooperation, for only by joint action can certain difficulties be overcome. Schools must provide a measure of self-government so that our young people will learn the true meanings of both leadership and obedience. Then we may confidently expect that the workers themselves will, in the near future, assist in furthering youth's promise of service and growth.

After all, vocational guidance supplements the nation wide study of and adjustment to, individual differences. Too often, studies have been made of these individual differences and then the matter was dropped. It is not of much value to discover these differences unless something is done as a result. Neither is it sensible to en-

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deavor to guide a child's choice of an occupation or of courses, without ascertaining his talents and lacks. The two are not separate parts of education but are closely related. No counsellor or teacher or parent can be forgiven for neglecting either the study of individual differences in their children or the attempt at proper guiding toward a life work. The parent's work does not end with providing food, shelter and clothing, nor the teacher's responsibility with presenting facts. Even though exposed to facts, pupils often fail to take them and even if taken, they may fail to connect with any other facts and thus, isolated, be of little or no use.

Business leaders are constantly asking for men and women who can apply their knowledge. That is the contribution that we feel we are making to education and to progress when we tie up the vocational guidance with the rest of the school curriculum and make as many outside contacts as possible.

A few years ago we heard much about vocational guidance to develop leaders. Popular opinion picked up the idea, and for a while that phase ran rampant until a clever writer, Christian Gauss, was inspired to write in one of our new books, "Contemporary Thought" an article entitled

"The Comedy of Leadership", which opened the eyes of real educators to the absurdity of the over swing of the pendulum.

We need leaders and good ones, but also, we need intelligent followers. In every person's life there will arise occasions when he will need to be a leader and if, during his school years, he has had some training for it and some chances to lead, he will become equal to that occasion. It is a satisfaction to have led in something at some time and unless a person has had that satisfaction a few times, he can develop an inferiority complex. Many of our maladjustments are due to that feeling and from that develop dangerous grumblers, dissenters and generally disagreeable people.

As an instance of the result of trying to develop leadership, I quote the case of a Chinese boy, Walter, who came into a fifth grade when he was nineteen years old. This boy had much more schooling in China than most of the Chinese who come here, but he had not mastered our language. He was put into the fifth grade because it was the lowest grade in that building.

Some of the children made life very unpleasant for him before and after school and at recess, despite the vigilance of the teachers in the yard. An opportunity knocked, in the form of the study of tea. The teacher spoke to the Chinese boy at the close of school, suggesting that he might know something about that subject that the other pupils did not know. There is always one thing at least in which every normal human being excels; there is always one thing that he knows well; Walter knew many things well but tea gave him his chance to prove to these rather smug little people in a distinctly residential district that he knew much more than they despite the seeming handicap of his language difficulty.

When the subject of tea came up the next day, the teacher called on Walter. It happened that he had lived with his uncle, a tea-grower in China and so was well informed. He had pictures and samples to illustrate his talks, and as he went on, he lost his Oriental stolidness and grew quite enthusiastic in telling about the tea culture of his native land.

"Terrace", "culture", "export" and such words seemed to give him no trouble at all. Children are fundamentally just

and there came over that class a greater respect for Walter as well as a little shame for themselves for their previous antagonism. In him in that moment, was born a spirit of power and in them all a little dawning of the meaning of equality. They had, what he lacked, the command of the English language and a feeling of security in the land in which they were born; he had what they lacked, the experience, tradition and language of a very old country and the advantage of travel.

I believe that was a successful attempt, along vocational guidance lines, to develop leadership.

However, too much stress should not be laid on the leadership idea in this democracy. Followership is very important. No one likes the child who will not play unless he can be "It" or the adult who will do community and church work only when he is chairman. The boy or girl who demands to be the centre of attention is very unhappy when just "among those present" and usually makes that unhappiness felt by others - in other words, over emphasis on leadership can well develop anti-social beings.

Vocational guidance and, in fact, education as a whole fails unless it develops qualities of followership as well as those of leadership; not the blind following of a

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flock of sheep or a street gathering swayed by the force of a political "wardheeler", but an intelligent follower who weighs and judges and acts on principle rather than on emotion, and who is big enough to submerge his own petty interests for the general good of the family, the school, or the community. Then we have cooperation which we must have if our civilization is to progress. When we have taught our boys to play and work and live together harmoniously we have gone far toward our ideal of mutual respect between races, classes, creeds and nations and only in as far as vocational guidance correlates with all the rest of the curriculum can it hope to approach this ideal.

Placement of pupils in jobs is often the only side of this vital problem that is known to the public. Unfortunately, it is the only phase in which some parents are interested.

Every large city has a vocational guidance department with a central office at the educational headquarters. Most small cities are fast organizing such departments, also through this department, the vocational counsellors in each school are able to give assistance to boys and girls wishing to work whole or part time. This department follows up these

1. The first part of the paper is devoted to a general discussion of the problem of the existence of a solution of the system of equations (1) for arbitrary values of the parameters α and β . It is shown that the system has a solution if and only if the parameters α and β satisfy certain conditions. These conditions are derived from the requirement that the solution must be unique and must satisfy the boundary conditions.

2. In the second part of the paper, the problem of the existence of a solution of the system of equations (1) for arbitrary values of the parameters α and β is solved. It is shown that the system has a solution if and only if the parameters α and β satisfy certain conditions. These conditions are derived from the requirement that the solution must be unique and must satisfy the boundary conditions.

3. The third part of the paper is devoted to a study of the properties of the solution of the system of equations (1) for arbitrary values of the parameters α and β . It is shown that the solution is unique and satisfies the boundary conditions. It is also shown that the solution is continuous and differentiable.

4. The fourth part of the paper is devoted to a study of the properties of the solution of the system of equations (1) for arbitrary values of the parameters α and β . It is shown that the solution is unique and satisfies the boundary conditions. It is also shown that the solution is continuous and differentiable.

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6. The sixth part of the paper is devoted to a study of the properties of the solution of the system of equations (1) for arbitrary values of the parameters α and β . It is shown that the solution is unique and satisfies the boundary conditions. It is also shown that the solution is continuous and differentiable.

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8. The eighth part of the paper is devoted to a study of the properties of the solution of the system of equations (1) for arbitrary values of the parameters α and β . It is shown that the solution is unique and satisfies the boundary conditions. It is also shown that the solution is continuous and differentiable.

9. The ninth part of the paper is devoted to a study of the properties of the solution of the system of equations (1) for arbitrary values of the parameters α and β . It is shown that the solution is unique and satisfies the boundary conditions. It is also shown that the solution is continuous and differentiable.

10. The tenth part of the paper is devoted to a study of the properties of the solution of the system of equations (1) for arbitrary values of the parameters α and β . It is shown that the solution is unique and satisfies the boundary conditions. It is also shown that the solution is continuous and differentiable.

11. The eleventh part of the paper is devoted to a study of the properties of the solution of the system of equations (1) for arbitrary values of the parameters α and β . It is shown that the solution is unique and satisfies the boundary conditions. It is also shown that the solution is continuous and differentiable.

12. The twelfth part of the paper is devoted to a study of the properties of the solution of the system of equations (1) for arbitrary values of the parameters α and β . It is shown that the solution is unique and satisfies the boundary conditions. It is also shown that the solution is continuous and differentiable.

13. The thirteenth part of the paper is devoted to a study of the properties of the solution of the system of equations (1) for arbitrary values of the parameters α and β . It is shown that the solution is unique and satisfies the boundary conditions. It is also shown that the solution is continuous and differentiable.

14. The fourteenth part of the paper is devoted to a study of the properties of the solution of the system of equations (1) for arbitrary values of the parameters α and β . It is shown that the solution is unique and satisfies the boundary conditions. It is also shown that the solution is continuous and differentiable.

15. The fifteenth part of the paper is devoted to a study of the properties of the solution of the system of equations (1) for arbitrary values of the parameters α and β . It is shown that the solution is unique and satisfies the boundary conditions. It is also shown that the solution is continuous and differentiable.

pupils to see that they are not exploited, not overworked and are given a chance to advance.

Many pupils have discovered aptitudes and preferences in these outside try-out experiences while working after school or in vacations. These follow-up guides endeavor to see that the pupils receive some intelligent instructions about their duties and that they are given a chance to do more than one part of whatever the business may be. These children should not be mere cogs, but should be learning as they earn.

This is a splendid system and in time society will reap the benefit of it.

How different from the situation in a small town where a certain high school boy obtained a job in a combination store and street railway waiting-room. The proprietor of this emporium said to the boy when he arrived to start work; "Let's see, young feller, you are to sweep the floor, wait on the trade, put on a white coat when them high school girls come in afternoons and work the stale candy off onto the kids." The bibulous owner then departed for parts unknown, but not dry and left that boy in full charge of that busy little store. Guidance was lacking there.

It is the first time that we have seen
a man of this kind.

There is a great deal of talk about
the future of the country, but it is
all very uncertain. The people are
very much divided in their opinions,
and it is not clear what will
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This same boy worked one summer in a store at the fork of four roads in a rural village. Upon asking the proprietor about hours and duties, he received this reply. "Hours? Wall - seven in the mornin ter ten at night with two nights off for sparkin and Sunday mornin off fer meetin, if yer took that way." "You'll see plenty of work; sell everything that you kin for cash but otherwise take up the value in tradin' eggs, vegetables or hay - and keep that d---n cat out of the butter." While this was fairly comprehensive, it was not very definite. If a vocational guidance department had been in touch with this boy and this employer, a more reasonable situation would have developed.

We need this part of the guidance system that reaches out to the public just as much as the part that helps develop our pupils in the school curriculum.

Society is demanding much of the schools now and the more it demands, the more benefit our pupils will derive from their education. Let us hope that we will see very soon a vocational guidance department in every nook and corner of our country. Let us hope, too, that every branch of that department will work in harmony with every other part and that it will correlate with all bran-

ches of the regular school curriculum. Then and only then will vocational guidance realize the fulfillment of its great purpose, which is to fit each pupil for his place in the world. Surely, the Creator put no one here unless there was a place for him, and we all believe - with Lowell:

"No man is born into the world whose work
Is not born with him; there is always work
And tools to work withall, for those who will;
And blessed are the horny hands of toil;

The busy world shoves angrily aside
The man who stands with arms akimbo set,
Until occasion tells him what to do,
And he who waits to have his task marked out,
Shall die and leave his errand unfulfilled."

SUMMARY

Work of some kind is a necessity for most people in our country today, and the business of getting and of keeping a job is a very serious one.

History has shown that the people who are engaged in occupations suited to their likes and aptitude have usually been good citizens. It is then, very obviously, the task of the schools to help to fit pupils for gainful and suitable occupations and to open their eyes to the need of a world for all kinds of workers. Intelligent vocational guidance will do the former (and it should be stressed in our junior high schools) and vocational enlightenment woven into each of our many school subjects is the best method of opening their eyes and broadening their outlook on work and workers in general.

CHAPTER VI.

CORRELATION THROUGH HEALTH STUDY.

It is natural for a person to regard the subject he or she is teaching as the important subject of the curriculum and to advance arguments to prove that stand. Whether or not health study is the most important, we will not attempt to decide here, but certainly every one will agree that it is important.

Not only is the study of health vital, but the forming of good health habits and the elimination of poor ones is necessary. Pupils have been known to learn verbatim the names and locations of each tooth, and never brush their teeth. Many a pupil has drawn pictures of the digestive system, learned scientific names and recited the list of function of each digestive organ and then abused them all by wrong diet, hasty swallowing and over-eating. That kind of health study belies its title. We aim to teach our pupils respect for their bodies and the importance of health and to establish correct health habits, not for a period of a week, but for all time. That is the ideal and schools all over our land are striving toward that goal. We must be sane and sensible and persistent if we would have results and, we

must correlate this health work with our other studies and activities.

Very often health study is the motivating element of a large unit of work as in the following instance:

"DRINK MORE MILK" CAMPAIGN.

One morning our arithmetic lesson was interrupted by a gentleman bearing a note from the principal which said that the bearer had permission to speak on the value of milk to all people, especially to children.

He had some pictures under his arm and a smile on his face, both of which facts interested the pupils, who gladly laid aside their fraction drill to listen to him, little dreaming that he would ask them a question in fractions.

He showed them pictures of cows, of model dairies, of milk trains, of home refrigerators, of healthy, happy babies and of frolicking children.

After exhibiting these in rapid succession, with a few words of explanation on each, he said, "Now why do you

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think I am here?" With one accord they answered, "To get us to drink more milk." He went on to tell them of the food value of milk and how it compared with steak, beans, potatoes and other food in regard to materials needed in the body, and its cheapness at any price. He said a few words on the care of milk while the pupils clamored to see the pictures again, which was, of course, what he wanted.

He then carefully explained all the pictures, and produced more, showing the contrast in a child before and after taking, (the usual thing of a city waif; emaciated; drooping, bone-protruding, and the same child three months later after his daily quart or two quarts of milk; bright-eyed, erect, plump and happy.)

Children's things appeal to children always and it was this picture that made a lasting impression.

The fact that he asked them how many gallons of milk would be needed daily if each pupil in this class of forty decided, (as of course, he felt sure they would) to avail himself of the great opportunity of purchasing one-half pint of milk at recess for four cents, gave the teacher an idea.

Our visitor departed amid many promises to drink more milk, and while the gleam of interest still lingered in

their eyes, the teacher asked; "How many children do drink milk", and found that only nine did so regularly, seven sometimes, and the rest seldom or never. Nearly all agreed that mother wanted them to drink it but they did not care much for it or there was not enough to go around or some such excuse. However, it needed very little urging to get a unanimous consent to try it every day at recess instead of the inevitable lollypop. With the usual idea of competing and comparing, they wished to see how the other classes in this not very large building felt about it, so, a committee was appointed to take a milk census in all rooms in order to find out just how many were drinking milk regularly.

To be sure, occasionally life did not agree with the pictures the gentleman had shown us, as when a big husky boy said that he did not drink milk, while a puny, pale, little girl in the same grade was drinking three pints a day. The dear little teacher of that class saw the look of puzzlement so asked the boy if he ever drank any. He replied that he "used to drink quarts of it before it went up in price", so the class decided that those quarts had no doubt done their good work for him, while the little girl lisped that she was just getting over whooping cough and was drinking the milk to get strong again. Then the teacher, having given just

the needed amount of help, withdrew and left the children again at the front.

The committee, after its tour of the rooms, came back to report to the class that "our children ought to drink more milk", thereby beginning with a spirit of civic responsibility. After a little informal discussion, it was decided that the older pupils should take the lead, should set the example, and since they were so much larger and did so much more work, should drink more milk than the little ones.

It was decided that each member of the class should write an appeal worthy to be read in all the rooms and sent to a local paper, also, that each pupil should speak of it to his parents and also to the other fellow's parents, lest he forget.

A committee was appointed to interview the superintendent and another to make terms with the milk dealer about quantity, time of delivery, responsibility for broken jars and such details. The matter was left hanging there to see what new ideas might arise.

The written appeals to be given in each room were really so good that it seemed impossible to decide on one. The class finally chose two, each to be learned, rehearsed and delivered by its author. Consequently, one speech was given in each room in the morning and the other in the afternoon, "to keep it in their minds" they said. Certainly that was good judgment. The teacher never could have aroused such interest in judging a set of papers merely for marks. They needed to judge because on it depended the success of their plans.

The papers really were of merit and it was decided to send one to each of the local papers. More than ever the teacher realized the truth of the statement *(16) "When the child talks or writes in school to accomplish something he really wants to do, the exercise becomes a vital experience to him. The hope of writing something of sufficient merit to be selected for publication in a school paper stimulates children to uncommon efforts in writing."

*(16) Wilson - Motivation of School Work, P. 73.

The written reports to be given in each room
were usually no more than a general description of the
on one. The plans finally chosen for each room were
prepared and delivered to the subject. Consequently, the
subject was given in each room in the morning and the afternoon
in the afternoon, "to keep in their minds" they said.
Explicitly that was not intended. The teacher never could
have arranged such material in the form of papers
without some work. They needed to judge because in the
past the success of their plans.

The papers really were of little use to the
subject in some one to each of the local reports. Some plans
even the teacher realized the truth of the statement that
"When the child takes on a plan in school he is usually
motivated by the result which is to be, the student receives a
very extensive knowledge of this. The hope of winning recognition
by the school which is to be received for participation in a
school project stimulates children to work on others in
the class."

The next morning some groups were discussing milk in the school yard while others were on the seemingly inevitable topic of movies, which furnished the teachers with another idea, because if the youngsters can not be kept out of the movies, then it is time to put good into the movies.

The school doctor came into the room that morning while orator number one was rehearsing his speech to his own class and receiving valuable suggestions from them before going to the other classes. The kindly man was delighted, made a few suggestions, offered to send some books and posters on milk, said to call on him if he could help, and departed on his rounds to spread the good news of the milk campaign as he went, which, no doubt, accounted for the unexpected telephone call from the visiting nurse association offering lantern slides and other services if needed.

The program seemed to be in the process of becoming organized; the committee reported that one milk company made a fine offer and would deliver milk at the right time for the right price; our superiors were, as

we had expected, interested, enthusiastic, and helpful; and the local papers agreed to print not only the pupils' articles but editorials of their own.

Here we had ~~(17)~~ "success bringing satisfaction and satisfaction demanding more". The pupils wanted more and more committees. That was self-activity, the basis of all education. They sensed a need which they wanted to satisfy and were willing to use hands, feet, pens, brains and time to do it.

The most important committee (to them) was the one to interview the moving picture manager to ask that he put on slides offered by the health department. Of course, they were eager to be off, but the class thought that he might ask to see the slides before deciding.

This necessitated telephone calls to the nurse, who very generously drove to the city to get some large slides from the State Department and accompanied the committee later to the interview. Surely these lessons in business and in courtesy were of value to these children.

Needless to say, the "movie" man put on the slides and even spoke a good word for the health work. If that campaign had done no more than that, I believe that it would have been worth while.

The civics was incidental but in that way it was true to life. The cooperation of that community with its schools gave to children and teachers an assurance of good-will and interest that was never forgotten. They felt it, and knew it was there, and used it again and again. It gave the community a chance to come in with the schools and proved that an opportunity was all that was needed.

One is reminded here of the advice that the late Kate Gannet Wells of the Massachusetts State Board of Education gave to a graduating class at Normal School. "As I look at your eager faces today, I shudder to think what school room life can do to that look of the joy of living if you let it. Go forth, girls, and be yourselves. Do not try to uplift the community that pays you - - enjoy it. You can do more real good by enjoying your pupils and their folks than in any other way. Be a part

Readers to say, the "novel" can not be the

edges and even broke a good story for the novel.

If that reputation had been as good as that, I believe

that it would have been a little better.

The novel was intended to be in two parts.

It was more to life. The cooperation of a great number

with the novel was to be collected and arranged in two

parts of good will and interest, and the novel was to be

that part of it, and then it was to be, and then it was

and again, it was to be something of a story to be in

with the novel and to be a story that is especially for all

that are needed.

There is a number of the novel that the

into the novel and the novel is the novel.

of the novel is to be a novel, and the novel is to be

"As I look at your novel today, I believe to think

and to be a novel, and to be a novel, and to be a novel.

living it is to be a novel, and to be a novel, and to be a novel.

to be a novel, and to be a novel, and to be a novel.

to be a novel, and to be a novel, and to be a novel.

and to be a novel, and to be a novel, and to be a novel.

of that community, do all you can for it and let it do all it can for you and for goodness sake look as if you enjoyed it".

These teachers were doing for the community, were allowing it to do for them and were looking as if they enjoyed it.

When the community is with its teachers, they can do anything, practically - so - they decided to have a parade the following Saturday afternoon and to start the next Monday on their milk drinking.

There was no fear of interest waning. Many of the children were consuming quantities of milk at home already, which was the main object of the campaign. The half pint at school was really of importance only as it formed the milk drinking habit.

There was only one complaint from a mother, a smiling one. Six year old Johnny had drunk the baby's milk and insisted that the teacher told him to do so. This sensible mother smiled as she related the instance

of that country, we all know that it was not in 1914
it is not the only one for England was born in 1914
October 1914.

These things were done for the country,
and nothing is done for the country and the people in it
and nothing is.

These things were done for the country, the
and the country, the country - the country is the
a part of the country, the country is the
the country on the country.

There are no more of these things, they
of the country, the country, the country is the
the country, the country, the country is the
the country is the country, the country is the
as it is the country, the country is the.

There are only one country, the country,
the country, the country, the country is the
the country, the country, the country is the
the country, the country, the country is the
the country, the country, the country is the.

to the teacher and said: "That was a home project and I settled it in the old-fashioned way that seems to have gone out of style". However, while Johnny's eyes were dampened for a while, his zeal for the milk cause was not.

The class read everything in their hygiene books about milk and borrowed more books. They were especially interested in the amount of water in milk and decided that, if one could not afford milk, water was the next best drink, much better than tea or coffee.

The discovery that there was mineral matter, like iron, in milk, gave them a new trend of thought. The girls, remembering the doctor's story of iron being particularly useful in producing rosy cheeks, grew even more keen for milk. The sugar and fat and proteid content came into their hygiene work and made them realize that crackers, milk and fruit was a well balanced, easily digested, nourishing luncheon.

They studied the great dairy regions of the United States for geography and made maps showing their location. They studied the maps and pamphlets sent them by the various canned milk producers which opened their

eyes to the immensity of the canning industry of our country. The transporting of milk is a problem in the speed of modern methods of moving products.

Their first arithmetic lesson was on finding the number, then the per cent of pupils in each room who were drinking milk at home. No one seemed to think this drudgery. Neither was it soft pedagogy; it was correlated and motivated work. They found that they needed a review on percentage and they had it. *⁽¹⁸⁾ Whatever is found to promote a self-understood and self-projected purpose is mastered with a full sense of its worth. The mind is in a state of readiness for it and it is assimilated with relative ease. "I think every teacher agrees to that." *⁽¹⁹⁾ Ideally, drill lessons should come when the children see that their future progress is conditioned by successful formation of the habits involved." So, they drilled some more on percentage

*⁽¹⁸⁾ Bonser - The Curriculum, P. 22.

*⁽¹⁹⁾ Strayer - Brief Course in the Teaching Process, P. 42.

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and made graphs every day to show what part of the pupils were drinking milk. These were posted in the hall where all might see them.

What could be more practical arithmetic than the financial transaction here? A committee of three, one of whom was changed each week, looked after the money. One did the actual handling, making change and paying the bills, another tallied on paper, while the third recounted and checked. Every person in the class served on this committee during the year.

Arithmetic and drawing were connected in making the posters and in constructing the banners to be carried in the parade. They made their own costumes for the parade and it was a unique parade.

They had drums, bugles and harmonicas for a band. Beside the national flag and the school flag, they carried banners bearing such inscriptions as, "Drink More Milk", "We Want to Grow" and "Milk is Good".

The costumes were made of white crepe paper

and also perhaps every day in some part of the world
there were people who were not so well off as
all right and then.

That would be a very special relationship then
the financial relationship between a country and
one of them was changed each year, looked after the way.
One of the things that was done was to keep the
thing, another failed in power, and in fact the government
was changed. Every person in the class arrived in this
condition during the year.

At the time the British were connected in Britain
the people who in fact were the British in the world
in the world. They were the only ones who were
the only ones who were the only ones.

They were the only ones who were the only ones
the only ones who were the only ones who were the only ones
the only ones who were the only ones who were the only ones
the only ones who were the only ones who were the only ones.

The only ones who were the only ones who were the only ones

over newspaper (for endurance). They were very simple, just strips the length of the child from neck to ankle, to represent milk bottles. There was a strip of yellow around the top to represent cream. These had to be fastened after they were on, and, were not of sufficient width to permit any frolicking - but this was a serious affair. Artistically it was a success and it certainly helped their cause and the cause was just. The milk drinking has kept up from that time to the present and surely has helped the children physically, which was its purpose. The arithmetic, English, drawing, civics and geography were all a part of the health program and correlated with it as naturally as the various digestive organs of those pupils worked together in assimilating the milk.

There is ever increasing stress on health education in the schools, and the more thoroughly it is merged into the daily program, the more functional it becomes. Some of this work may be in small units and some in large. In talking about them, it is natural to select those that do include all the pupils and do correlate a great many subjects.

CONSTRUCTING AND EQUIPPING MEDICINE CABINET.

The making of a medicine chest was the correlating stimulus for a block of work in a mixed class. In their manual training period, the boys told the shop instructor that they would like to make something useful for their homes for Christmas. A number of things were suggested but were scornfully rejected because similar articles could be purchased at the "V and X" or because they did not appeal. The instructor mentioned that he was making a medicine cabinet, an article which every home should have, and added "I suppose each of you fellows has one". Very, very, few had, and immediately each wanted to make one. When finished, they were cabinets that any home could be proud to possess.

They were made of salvaged lumber, so cost only fifteen cents, that expenditure being for hinges and locks. I mention this cost because, so often, when people tell us of things like that, they seem prohibitive to us on account of limited means.

One thoughtful boy suggested making a medi-

The making of a medicine chest was the first
thing I learned for a block of work in a mixed class. In
their annual training period, the boys sold the soap in
connection with their work and to some extent the
for their homes for Christmas. A number of things were
supplied and were accordingly rejected because of their
articles could be purchased at the "V and A" or because
they did not appeal. The instructor mentioned that he
was making a medicine cabinet, an article which every
one should have, and asked "I suppose each of you has
lost his one, very, very, very, and definitely
each wanted to have one. When finished, they were each
told that any home could be given a present.

They were made of relieved further, so that
only fifteen cents, that expenditure of the for their
and looks. A mention this best because, so often, when
people tell us of things like that, they seem to be
live to us an account of a better means.

One interesting way suggested making a medicine

cine cabinet for the school so that it would no longer be necessary for the teacher to use her rather limited desk space for the bandages and ointments so often needed.

The boys, as boys will, swaggered a bit when they returned to the class room and told of their plans. The sister of the biggest swaggerer happened to be in the same class, and, inspired (or goaded) by his strut, she asked, "May we girls fit up the cabinet?" Everyone thought that was a fine idea, so they elected a committee to consult with the nurse and with the druggist. This, you see, immediately connected the work with the outside world. Mothers were consulted and immediately great plans were afoot.

The school funds furnished everything required for stocking the cabinet as a part of our school equipment, although parents, the doctor and the corner druggist all offered to do so.

The nurse gave a first aid demonstration, to which the parents were invited one afternoon. That set the children to thinking, and they decided to give a play

in which they would use their knowledge and the cabinet and would call the play "Home Nursing".

Right here, teacher hesitated. Open confession is good for the soul, it is said. Why pretend that we are always full of enthusiasm? Very few people are - all the time. It seemed like a great deal of extra work just when everything was piling up.

She knew as every teacher does, that it is fairly easy to get children enthusiastic, but we have to live with them while they are enthusiastic and while it all looks well in print and trips merrily off a speaker's tongue, the guiding, the restraining, the helping over rough places and the avoidance of that confusion so often attendant on an undertaking of that kind, is our problem. She hesitated, but those eager faces and voices swayed her; they wanted to do it. It was a good project; the spirit, the motive and everything about it made use of their highest instincts; it was, after all, as fine a Christmas lesson as any could be and might well add something to the usual Christmas party and entertainment. Teacher summoned a somewhat weary smile and assented.

In reviewing that three-fold activity it is plain that those children used the constructive instinct, surely, in making that cabinet. It was really as good as some that sell for five dollars. They used the collecting instinct in filling the cabinet and the sharing instinct when they placed it at the command of the school. In the play they used the instinct of sharing as well as that of entertaining.

Many of their academic studies were correlated with the medicine cabinet. Some children will get their lessons anyway, but, with a purpose, they enjoy it and get a great deal more. The reason that this work is real and vital is because it reaches all the pupils. The slow pupil, the bright pupil, the nervous one and the phlegmatic one each has a part to do.

Experts tell us that, while milk and fresh air are needed by all and are good for all, they are especially necessary and beneficial to those who have physical weaknesses. Is not our educational work comparable with this? All enjoy and profit by motivated and correlated work but

in reviewing the case - the difficulty is
plain that there is a lack of co-ordination between
the various departments. It is not possible to have
as many people doing the same thing. They need the
proper training in all the different departments and the
management when they place it in the hands of the
in the city and use the method of working as well as
that of working.

Many of these people are not trained
with the scientific method. Some children will not learn
the same way, and, when a person, they learn in the
same way. The reason they learn in the
same way is because of the way they learn. The
method, the way of learning, the way of learning
one each has a part to play.

Experts tell us that, while the first step
is to be taken by all and we are all, then we are
necessarily bound to have some one to lead
us. It is not our duty to have some one to lead
us. It is our duty to have some one to lead us.

the child who is slow or, for some reason, has been neglected hitherto, will find his place and his work and so, will sense the fact that he is a part of the organization. Therefore, he will help and will be helped, which is the very first stepping-stone in democracy.

Every pupil participated in that particular unit of work. Their English work consisted of writing the play. It seemed as if their dictionaries were used as never before. The play was simple but was a good product for seventh grade children.

The arithmetic was obvious. The measuring of lumber, computing distances between shelves, and the placing of the lock, all necessitated fraction work. Troy weight was taken up briefly in the stocking of the cabinet. Ascertaining the prices of the various medicines was good domestic economy.

The geography was rather interesting and different from anything else that they had done in that subject. They were surprised to learn that vaseline worked

into their study of oil and oil regions; that castor oil came from the castor bean, one of the three hundred varieties mentioned in their study of beans and that common table salt has so many household and medicinal purposes. They began to have more respect for salt and consulted their geographies as to the sources of salt. It was interesting to note here that those who used the index, found the page and the information before the others. I believe, (to diverge) that we have really done a fine thing for a child when we have proven to him that the index is a short cut and saves time and energy.

The bandages showed them the indispensability of cotton and served as a very good motive for a review of cotton regions.

Boracic acid gave them a motive to find the source of borax, which sent them to the deserts of California and South America. The question of precipitation and evaporation entered here and science with geography answered all questions.

These are just a few of the products we studied.

...and all other ...
...from the ...
...to the ...
...and ...
...to the ...
...to the ...
...to the ...
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The hygiene chapter devoted to simple remedies was fairly devoured.

To them, of course, the play was the big event not the preparation, although they did put their hearts and souls into it all. The play was very simple, remember, they wrote it.

One girl, the mother of the play family was busy bandaging a little son's finger, after applying sweet oil - - as the curtain went up. He had presumably burned it on the candles on the Christmas tree that stood in the stage room.

Little sister got something in her eye as she played round the Christmas tree, and mother bade big sister take it out in the approved fashion, rolling back the lid and inserting an orange stick point wrapped in a clean piece of linen. Little sister did the necessary amount of squirming, but the substance was removed and big sister sent to the medicine cabinet for boric acid and an eye cup.

As mother chatted awhile with auntie, another

The following chapters devoted to a single household are fairly
unusual.

So that, at present, the time of the big event
has been postponed. I thought that this was the best
and so it is now. The play was very simple, but
yes, that was it.

One day, the women of the city finally
were something a little bit. I think, when we
were all - as the captain said, we had previously
known all the details of the situation and that
is the case now.

Little as they had known for the first
the whole thing was a surprise. The whole thing
was a surprise. It was a surprise. It was a surprise.
Back the life and the people in the house. It was
a clear place of life. Little as they had known
the whole thing was a surprise. The whole thing
was a surprise. It was a surprise. It was a surprise.
Back the life and the people in the house. It was
a clear place of life. Little as they had known
the whole thing was a surprise. The whole thing
was a surprise. It was a surprise. It was a surprise.

As we have seen, the whole thing was a surprise.

er son came in, bawling in a very realistic manner. He was holding his hand to his forehead which he had bumped on the stairs. Mother and auntie applied first hot, then cold pads while son fought and howled.

During, (or after) the administering or application of each remedy, the officiating nurse? explained what she was doing and why.

Meanwhile, seven year old Susie was taken violently ill, and the doctor was sent for. Auntie was so sure that it was appendicitis that she surreptitiously telephoned for a nurse, too.

Meanwhile, Susie moaned and groaned. Mother, remembering the large and varied amounts of food that Susie had consumed that day, administered castor oil and applied a mustard plaster.

The nurse and doctor arrived to find the supposed emergency patient fast asleep and on the road to recovery. These medical experts agreed that mother had acted wisely in each case and they all lived happily ever after.

Was it all worth while? We believe that it was. There was need for those cabinets in the homes of those pupils and there was need for it in the school-room as its subsequent frequent use proved. Every bit of the work was practical and I believe that it will carry over into their homes. If it does, we have succeeded in the best and largest sense.

One splendid opportunity to stress health and to correlate the study of it with the rest of the studies is found in the cooking room. So much of health depends on proper food that it is hardly possible to over-emphasize this important branch of school work for girls.

Despite advanced educational opportunities and regardless of the wide choice of careers open to them, a large proportion of our girls will marry. The majority of these will be the purchasing agent and the cook of the family. Even for those who have maids, the care of the food is often a personally supervised task, because a mother knows that the health and strength of her family is largely dependent on food.

Therefore, even at the risk of being consid-

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ered domestic and of marring beautiful nails, I believe that our girls should receive intensive and practical training in the buying, preparing and serving of food.

Housekeeping will be the life work for many of them and statistics show that a great deal of marital happiness and of the health of the next generation depends on this food question.

Girls of junior high school age are fully capable of grasping the facts of balanced diets, of vitamin containing foods and of neat serving. Usually, the mothers are glad to have them try these things at home and encourage them greatly. Thus, the lessons carry over into real life and are not mere matters of theory.

The cooking teacher can exercise a great influence on the health of these girls by helping them to plan simple, inexpensive meals for their families, purposely substituting puddings for pastry and cocoa for coffee. She can help greatly by stressing a variety of foods because it is surprising to learn what restricted

and finally, and of course, the most important, the
fact that this is a very serious and practical
problem in the world, requiring the action of man.

The question is: how can we live with the
fact that we are not a great deal of
the human race, and of the human race, the
question on this local question.

There is a lot of talk about the
question of the future of the world, of
the future of the world, of the future of
the world, and of the future of the world,
and of the future of the world, and of the
future of the world, and of the future of
the world, and of the future of the world.

The question is: how can we live with the
fact that we are not a great deal of
the human race, and of the human race, the
question on this local question.

diets many of these families have. Sometimes it is through the ignorance or laziness of the mother, but more often because of prejudice against any new or "foreign" food. If the teacher can interest the girls in these many kinds of food and lead them to acquire a taste for them, they are usually introduced into the home. Almost invariably the mother will say - even in the poorest districts, "I didn't think much of it, but Mary wanted to cook it, so we ate it to please her and now we like it".

Many of the digestive troubles and skin troubles yield to this change of diet and girls are easily appealed to through the idea of improving their complexions. This is good science.

Simple budgeting is done in these classes and thereby we have correlation with arithmetic and spelling.

We build, perhaps, better than we know when we make of cooking a very important subject. History shows us that the morale of an army is greatly aided by good food and college authorities are most careful

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of the selection and preparation of food in the dormitories. Why? Because the bodies and minds of the student body are aided by good food.

The mother who looks well to the food of her family sends a man to business and children to school with healthy bodies, alert minds and strong nerves, unless some other factor works as an antidote.

Many a man's grouch and child's inattention is due to the lack of breakfast or to an unhealthful one. Many a man has failed to grasp an opportunity or to compete successfully with others because of this same grouch; therefore, he was not able to earn a sufficient salary or wage to enable the mother to buy proper food for the subsequent meals, and so the family suffered. It seems to be a vicious circle. Verily, the family's food is an important factor in its health, happiness and success.

This picture is not over-painted and there is no fear that we will over-stress this part of the work with our girls. It is always safe to start correlation with a unit of work on health. We should see that the

thought of health is ever present in all our studies and we should insist on posture, on cleanliness and on ventilation.

History has known a few starving geniuses who produced some great work and some dyspeptics have made contributions to progress, but these are rare; and geniuses and dyspeptics are hard to live with, as we all know. We want our boys and girls to be healthy, happy, normal human beings, and so, we urge that the study of health may permeate all school work.

SUMMARY

It is important that we stress the subject of health throughout the day, not just in the hygiene and physical exercise period.

We have worked out health projects that included every study in the curriculum and every child in the school.

We have found also that little health plays emphasize the necessity for cleanliness and the value of first aid remedies more than hours of class room teaching could do.

It is possible for health study to permeate geography, science and history as well as hygiene.

Summary

It is important that we secure the subject of
health throughout the day, not just in the morning
and evening exercise periods.

We have worked out health projects that in-
volved every study in the curriculum and every child
in the school.

We have found that the little health plays
contribute to the necessity for cleanliness and the value
of first aid remedies more than hours of class room
teaching could do.

It is necessary for health study to permeate
every study, not only in class but in every activity.

CHAPTER VII.

CHARACTER TRAINING

"CHARACTER IS WHAT GOD AND THE ANGELS
KNOW WE ARE."

Certainly we mortals attempt much when we attempt character training; yet it is the first duty of the home, the school and the church. No one ever denies that but, at times, all seem prone to forget it.

More and more are homes and churches shifting this burden to the schools. Whenever a race riot occurs, a bank is robbed or some heinous social crime is committed, newspapers, magazines and throaty-voiced orators demand, "What are the schools doing?" It is never, "What is the matter with the homes", or, "What is the church doing", but always, "What is the matter with the public schools?"

Despite the unfairness of the demand, the schools gladly accept the burden and carry on, for they realize that nothing is more important than character training.

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There is an alarming amount of juvenile misdemeanor, rowdyism and even crime. A Chicago judge made this statement over a year ago: "More than 90% of the hold-ups, breaking and entering, assaults and murders are committed by youths between the ages of sixteen and twenty-one years. There is also much loose thinking, loose talking, and loose voting among adults".

In what way can the schools aid this problem? Some say by having courses in character training, while others claim that we should teach our history, geography and literature with an aim to character training. Most educators now agree that we should do both.

Various cities and towns have outlines and laws for character training, all really based on the Ten Commandments and on the Virtues; the three supernatural virtues of Faith, Hope and Charity and the cardinal virtues: temperance, prudence, fortitude and justice. Some one has said, "Character is the sum of all the virtues".

In a primary grade where character work was taken up for the first ten minutes every day, the children

There is an element of the
population, mostly living in the
city, who are not yet a year ago, and
out of the 100,000, perhaps 50,000, are
the number who are not yet a year ago,
at present, and the number who are
not yet a year ago, and the number who
are not yet a year ago.

In the case of the number who are
not yet a year ago, the number who are
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In the case of the number who are
not yet a year ago, the number who
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year ago, and the number who are not
yet a year ago.

worked a whole month on "Kindness". Those little tots will never forget those lessons. They had memory gems, little plays, and little stories stressing kindness. Is there anything that so smooths life's rough spots?

The teacher said that, during the previous week, she had heard a woman of seventy years speak thus of her husband: "Thomas has always been a good provider but he has never been a kind husband". That seems almost a tragedy. Let us hope that the seeds of kindness sown those April mornings in the hearts of those tots in a city's crowded tenement district may grow and flourish.

In one of the expensive private schools of New York, run on the Dalton plan, one sees evidences everywhere of the woven-in variety of character training. One of the outstanding features of that school was the stress laid on good sportsmanship. These pupils were most willing to praise another's good work and to acknowledge its evident superiority to theirs.

One of the great faults of most schools has been the teacher stimulated competition which soon becomes rivalry, then jealousy. It is not wholesome. What if they must meet competition outside? I believe

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...the whole world is ...
...the whole world is ...

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that urge to outdo the rest of the class is undemocratic. I contend that the only urge should be to encourage each pupil to do his best without too much comparison with the other fellow's best.

In our own building we were working on character training. We stressed it through history one semester.

"Lives of great men all remind us

We can make our lives sublime."

sang the poet, but "Not necessarily", says the psychologist. While we may hold great men up as examples to our pupils, we must stress certain definite qualities in those men, and emphasize the fact that those qualities were instrumental in causing those men to perform the deed for which history honors them, and then go further to show the influence of those deeds in history, in order to make an impression on our young people. With all this, it may still remain an appreciation lesson, which is fine in its way, but not our goal.

However, if we discover the civic "shortages" of our groups and choose our "splendid examples" wisely in order to show that those men possessed and cultivated those traits of character, then we are in a fair way toward

character training. Even if we succeed in one direction and one situation, we know that there is little, if any, transfer. We have as yet no satisfactory method of testing. Perhaps we may never have; perhaps we should not have. I do not know. I am practical, but I believe that there are still some things that may be sensed rather than tested. But we must be sensible about the matter. We must not use methods that produce smug little hypocrites who, each morning, recite a list of their virtuous doings with emphasis on the correction of their playmates. That is fundamentally wrong.

On the other hand, if a teacher recognizes general shiftlessness, especially in the matter of punctuality, as a "shortage" of her class and of the neighborhood, and puts forth her best effort in the "character" period, as well as at other times, to stress the importance of promptness and punctuality by readings and stories of delays in the arrival of reinforcements or supplies causing defeat in battles, she has made one step toward her goal, which is, of course, to cure that particular kind of shiftlessness. Stories of Washington's insistence on punctuality; of train wrecks and loss of many lives through the lack of it, all help toward a definite purpose. If, within a few weeks, that class begins to have 98 per cent,

99 per cent, and 100 per cent attendance with no tardiness (or a very rare one) then her work has functioned. It certainly has started those pupils in a very good habit; and, after all, our morals, like our manners, are more or less matters of habit. I trust that is not heresy.

I saw the above experiment done in my building one year. We were in what was commonly called a "hard" district. It was most cosmopolitan, surely. The population was a varied and a rather quarrelsome one. The boys quarreled in the yard and on the street, while their parents hurled epithets and garbage over back fences. One heard: "Harp", "Wop", "Ikey", "Frog", "Nig", and "Squashead", shrieked by the boys around the streets. Mothers came with such remarks as these: "That 'Bohunk' next door is no good; he's not Scotch, we are", with an air of conscious pride; or: "All thim 'Wops' are dirty; don't set my John anext that Tony".

Tolerance and Christian charity? No! Racial prejudice, snap judgments, and sweeping assertions. With all that to combat at home, we felt that even a little over emphasis on tolerance might be allowed; so we worked on Tolerance, mainly through history and biography that semester but, wherever we found an opportunity elsewhere, we seized that, too.

We started with Marquette, whom Wisconsin chose to be her most honored citizen in the Hall of Statues in the capitol at Washington, District of Columbia. That ardent French missionary was tolerant, so tolerant that he gave his all to bring the heathen Indians to Christianity. Always kind, not sitting in judgment, not scorning the friendship of the unlettered savage, but even trying to see the Indian point of view so as to help him to a better one.

We read of Lafayette, who left the ease and comfort of his native land to fight for America. Why? Partly adventure, to be sure, but we emphasized his open-minded tolerance that could see and understand America's yearning for freedom, and wish to help her gain it. However, lest tolerance be confused with weakness, we elaborated on the unquenchable patriotism of those French poilus at Verdun and their immortal slogan, "They shall not pass".

Records show that Haym Salomon, a Hebrew, pledged his entire fortune to the patriotic cause in those dark days of the Revolution when Robert Morris solicited funds for Washington in response to a desperate appeal from the latter during that dire winter at Valley Forge. Surely Salomon's mind, as well as his purse, was

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open. He contributed toward America's success in the manner most needed at that moment.

The scribe in the tool making shop gave us an opportunity to trace back the origin of the word "scribo", the Hebrew "to write" and "scribe, a copyist", to show that far, far back the Hebrews were men of letters.

We went on, and soon they vied with each other in finding instances in history of distinguished foreign-born Americans, or foreigners who rendered America great service. Our list contained the names of Pulaski, Kosciusko, Von Steuben and De Kalb, who helped to train our raw colonial troops; Generals Montgomery and Moylan of Revolutionary fame, as well as Commodore Barry, who came from Ireland; Paul Jones from Scotland; and Alexander Hamilton from the West Indies. This great statesman and financier was of Scotch and French descent, was born under the British flag, but was called "Next to Washington, our greatest American". It is risky to dwell much on the mixture of races, but we did stress the "melting pot" idea, the grasping of America's ideals, and his willingness to render public service when his country needed it. Thomas Paine came from England, Albert Gallatin from Switzerland, and Admiral Farragut's grandfather from Spain. Louis Pasteur, Michael Anagos, Edward Ferrero, Louis Agassiz,

John Ericsson, and many, many more, came quite naturally into our history. We did not do all those biographies. Time forbade. Instead, the boy who suggested the famous man, told his native country and his contribution to America. Of course, this was teacher-guided, as we had a goal, and felt compelled to take the best road to that goal.

At first it was "each man for his own country", but when a Spanish boy eulogized Admiral Farragut, and my splendid Swedish boy concluded his talk on General Ferrero by saying: "He bane one fine sheneral in the Civil War", my Greek boy enthused over Alexander Hamilton and an Italian boy said that Theodore Roosevelt was a typical American because he had Dutch, Scotch, French, Irish, German and English blood in him, I felt that we had made progress. We had opened their eyes to the fact that all races, religions and eras had many fine people; and surely eyes must be opened if minds are to be so.

Not alone in this poor district, where one sees life unadorned by any veneer of polite manners, but in every walk of life, tolerance is needed. The Bible, the clergy, literature and politicians (strange companions) preach it. We all can aim for it. Surely, if age doesn't

bring it, there has been a lack somewhere. Life and experience should teach us tolerance; and we should preach it, teach it, and try to exemplify it to our pupils. We may never reach it 100 per cent, but the school, and the neighborhood (we may leave the "state, the nation and the world", like the proverbial "dollar", to take care of themselves if we build the foundation well) are the big factors in teaching character through citizenship.

When a parent of lineage like my own dropped in one day to tell me: "That Eyetalian woman downstairs under me don't put no more boxes on the stairs for me to fall over since I offered her my clothesline the day hern bust, and the kids don't ever hardly fight now; and I told my man, and he says it's only the wimmin and kids that scrap so, anyway- the men don't", all in one breath, I wondered. Thinking of all the wars of all the ages, I questioned (silently) "his" statement, and wondered if perhaps my efforts the next year should not be to stress "famous women" lest our boys grow up with man-to-man tolerance, but lacking in the man-to-woman variety.

It is a big problem, and we have not yet solved it; but we believe that we have made a start in

the right direction. Surely those latter-day scandal mongers who emblazoned front pages with the foibles and indiscretions of some of our hallowed dead were not tolerant. There was no good to be derived from it. We must face facts; we must keep our feet on the ground but we must have ideals. Surely charity, tolerance and good sportsmanship are all akin. If we teach our boys to live and let live, but to be ready with a helping hand; to judge people, (when they must judge) not by petty faults, but by their "batting averages", we have gone far on the way to building character.

There are countless opportunities during each day to impress on our pupils, both by example and by teaching, the many traits that are needed for a fine character. Minds and bodies are very important and must be trained; but healthy, clever people can be Godless and very dangerous; so we must train boys' and girls' characters as well as their minds and bodies. Let us never grow one-sided or cause our pupils to do so. Let us keep our sense of real values and endeavor to help our pupils to become real people.

One of the greatest needs of the average American today is a good, broad-minded tolerance. Racial, religious and class distinctions have no rightful place

in our country; but on every side we find strong evidence of their existence. No amount of preaching against them is going to cure the evil. However, there is a great deal that we can do. Denis McCarthy's beautiful poem is a gem for pupils to learn and to love.

"This is the land where hate should die-
No feuds of faith, no spleen of race,
No darkly brooding fear should try
Beneath our flag to find a place.
Lo! every people here has sent
Its sons to answer freedom's call;
Their lifeblood is the strong cement
That builds and binds the nation's wall.

This is the land where hate should die-
Though dear to me my faith and shrine,
I serve my country well when I
Respect the creeds that are not mine.
He little loves his land who'd cast
Upon his neighbor's word a doubt,
Or cite the wrongs of ages past
From present rights to bar him out.

This is the land where hate should die-
This is the land where strife should cease,

in our country and on every side we find a new
in their relations. No longer do we find them
is a sign of our new life. However, there is a
good that is not in. There is a new life in
is a new life in every one of us.

This is the first time we should like
to find a new life, no matter of time,
to bring a new life to every one
to bring a new life to every one
to bring a new life to every one
to bring a new life to every one
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Where dark, suspicious fear should fly-
Before the light of love and peace.
Then let us purge from poisoned thought
That service to the state we give,
And so be worthy, as we ought,
Of this great land in which we live."

Our pupils must be led to see the folly and the unfairness of all such prejudices. A poem like the above could hardly fail to help in the banishment of such liens. Literature offers many opportunities to the teacher along the lines of character training.

Geography is another powerful ally. There is probably no better way of showing the utter senselessness of prejudices than by tracing the progress and development of any of our modern inventions and thereby realizing the inter-dependence of all countries and all people in a modern civilization.

One of our great statesmen has said, "Democracy cannot exist without understanding and tolerance". By tolerance we mean a belief in the creed that all men are brothers and all nations are neighbors.

We live in an industrial age -- an age in which

where duty, enthusiastic last night
and the night of 10th and 11th
That let us have these precious things
That service to the state and king
and to be worthy, as we ought,
at this great time in which we live.

For which must be let to see the truly and
the influence of all these conditions. I think that the
more we have to do in the present of
our time. It is not only the present but
the future along the lines of a better world.

Education is another essential thing. There
is a necessity to have the best of the world
and to have the best of the world. The present and the future
must be of one mind in the present and the future
and to have the best of the world and the future
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and to have the best of the world and the future
and to have the best of the world and the future.

So live - on a higher level - in the world in which

all nations and all people are inter-dependent. The work of many people of many climes is necessary to produce the comforts of an ordinary American home. We wish to impress on our pupils that man's mastery of nature has been accomplished by the combined effort of brain and brawn, capital and labor: - European, American, African, Asiatic and Australian. We wish to show that modern life can exist only by the work of all classes, colors, races and creeds. Each has his place and his part to do in the scheme of things.

"The Brotherhood of Men" and "Nations as Neighbors" are popular slogans. To achieve any such condition in the world, we must have tolerance and we must get the other fellow's point of view. Capital is necessary -- so is labor; each in its place and working together. Each must be tolerant.

All human beings, whether in Africa, Siberia, China or Boston have the same minimum needs: food, shelter, and clothing, as has been pointed out many times. "The laborer is worthy of his hire", says the Good Book. We must be willing for each to get and to have his hire in return for his work. We must have tolerance.

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Modern methods of transportation and communication are largely dependent on electricity. Of all the inventions of the last half century, the telephone is doubtless the greatest. Can you imagine living in a world without telephones? Commerce, business, society and education must all be seriously hampered.

The telephone is particularly important because by it, we hear the human voice almost instantly and with its natural tones.

To Benjamin Franklin, to Alexander Graham Bell and to many millions of workers the world over, we owe the efficient telephone of today.

After this general lead up to the telephone study, a certain class plunged into the study of it and found therein a wealth of geography, history, English, civics and such evidences of the need of each race for all others as to show them the need of the biggest and best variety of tolerance.

Many companies sent us charts which gave us the idea of the world-wide interests tied up with the telephone; which is just one example of the far-reaching

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effects of modern industry.

Nature and science seem to work in cycles. The telephone, which connects and serves the various parts of the world, is made of materials from all over the world.

No nation can live alone. Each country is dependent on many other countries for its necessities; that all may live and prosper. This telephone is made of, they discovered, nineteen different materials: rubber, linen, iron, zinc, gold, silk, wool, lead, nickel, silver, cotton, coal, copper, aluminum, platinum, shellac, tin, mica and asphaltum.

You see a dull black telephone with a shiny top, but Aladdin's lamp and all its magic knew nothing so wonderful as this telephone which you and I take so for granted and appreciate most when it is out of order or being used by the other party-line subscriber.

Mining, ranching, agriculture, commerce and manufacturing were all necessary to procure these materials. Laborers, scientists, farmers, shepherds, machinists, clerks, sailors and many, many more people did their shares.

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Hindu, Celt, Belgian, Swede, Italian, Mongolian, and African toiled that the treasures of the earth might be used for millions to enjoy. None could be spared; each did his part. Black and white, yellow and brown races gave something to us. All races, creeds and colors gave something to the production of the telephone and thereby gave something to us.

"They searched the earth that you might talk" is one of the advertisements which, certainly is a simple statement of fact.

Rubber comes from Brazil.

Silk from Japan, China and Korea.

Cotton from our own southern states and Egypt.

Linen from Ireland, Belgium and Russia.

Wool from our own western states and Australia.

Coal from Pennsylvania.

Iron from our Great Lake Region and Sweden.

Lead from Missouri.

Copper from Montana.

Zinc from Missouri and Tennessee.

Nickel from Ontario.

Aluminum from the Carolinas.

Gold from Colorado and Alaska.

Silver from Nevada.

Platinum from Siberia and Colombia.

Mica from India.

Shellac from Indo-China.

Tin from Malay.

Asphaltum from Trinidad.

This was world geography and a splendid review. The telephone company supplied us with specimens of all these materials and splendid charts on which to locate their sources.

Fortunes have been made and lost, lives have been lost and nations involved, in the desire of nations or companies to control some of these products. The cost of progress has always been high.

After the materials are gathered from the corner of the earth, the telephone instruments have to be manufactured. Do you know where these telephones are made? In Chicago. Perhaps you think of Chicago only as a city of stock yards. Not so -- it is fast rivaling New York in size and industry. Here, on the shores of Lake Michigan live many thousands of people from every country in the world, a fitting place for the manufacture of telephones -- made of materials gathered over the

Misses Mary and John.

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surface of the globe -- and going out to give service to all mankind.

These men helped to make your telephone, the boys discovered, after some study.

The Japanese prepared the silk used in covering the telephone cord; the swarthy British Indian mined the mica used for insulation; the Pennsylvanian mined the coal, which in tiny grains makes the vocal cords of your telephone; the Russian mined the platinum, and the Alaskan the gold; the Brazilian drained rubber from his jungle trees; the Irishman raised the flax from which linen paper was made for the sensitive condenser; the Egyptian raised long fiber cotton and the workman in Chicago put all the materials together to make your telephone. Each of these materials has a story of its own which we studied as we worked out this big correlation project.

Gold! What power it has had to attract men! Men have fought for it; men have starved for it and men have turned traitors for it. Wars have been fought for it.

The Spaniards wanted it and stole it from the American Indians. English sailors turned pirates and took

... and a lot of other things

to all of them.

There was a lot of other things

and other things.

The Japanese government

has a lot of other things

and other things.

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it from the Spanish treasure-ships. What crimes were committed for it! History has been made by it. The Gold Rush to California, to Alaska, and to Australia all had important results.

Gold is the standard for our money system in the United States -- but all the gold in the world is not of as much value as coal. Why? Because gold is good for ornament and for what it will buy -- while coal gives us one of man's greatest needs -- heat.

Coal and iron from the bowels of the earth! Black, dirty minerals! But we need them every day. Without coal we would not have steel and iron manufactures, and without iron and steel we would be a primitive people. Thousands of coal and iron mines lie beneath the earth's surface and thousands of weary men toil daily in them. The telephone manufacturers get their iron from Michigan in our own country and from Sweden.

Tin is found in very few places in the world. The Malay peninsula is especially noted for its tin mines. England has always had rich tin mines. Tin and lead combined are used for solder in all joints of the telephone.

Lead is found in large quantities in the state

is from the House of Representatives. That is all that
remained for it. History was made by it. The
gold mine of California, as Alaska, and the Northwest all
had something to say.

Gold is the standard for our money system in
the United States -- but still the gold in the world is
not so much as it was. It is because gold is
used for ornaments and for other things -- it is not
the only use of it. (The gold mine) -- that.

Gold is from the earth and comes from the ground.
It is, like silver, but it is not so common.
It is found in the earth and is used for ornaments
and for other things. It is found in the earth
and is used for ornaments and for other things.
The gold mine is found in the earth and is used
for ornaments and for other things. It is found
in the earth and is used for ornaments and for other things.

It is found in the earth and is used for ornaments
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The gold mine is found in the earth and is used
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in the earth and is used for ornaments and for other things.

of Missouri. Telephone cable wires are covered with it. In fact, the telephone companies use one-eighth of all the lead produced in the United States. These are not precious metals like gold and silver, but are essential to industry.

Zinc and copper together make brass. Zinc is very hard and very tough. It is affected very little by air or moisture. Plates of zinc are used as generators of electricity. There are many zinc mines in our country. Missouri and Tennessee produce much zinc.

Copper is found in nearly every country of the globe. The United States is very rich in this red metal. Montana, Arizona and Colorado have very important copper mines. Copper does not rust, is very durable, and takes a high polish. It is an excellent conductor of electricity, so is much used for wire in the electrical trade.

Pure silver is of a fine white color. It is softer than copper but harder than gold. Silver was one of the earliest metals known. It excels all other metals as a conductor of heat and electricity. Like gold and copper, it frequently occurs in a pure state in the earth.

Silver is regarded as money by at least two-thirds

of the nations of the world. In fact, nearly all oriental countries have a silver currency instead of a gold standard as in the United States. North and South America have the most important silver mines of the world. The silver mines of Mexico are the richest in the world. Nevada, Idaho and Colorado in our own country have valuable silver mines.

Nickel looks much like silver and is very hard. It takes a fine polish. It is largely used in the manufacture of German silver and nickel steel. The largest nickel mines are in Ontario, Canada.

Platinum is called the most precious of noble metals. Although first discovered in America, the largest supply now comes from the Ural Mountain region in Siberia.

In 1883, aluminum was considered a new metal. Now it is in common use. It is nowhere found pure. It comes from bauxite ore, much of which is found in the Carolinas and in Oklahoma. Aluminum is very light in weight and very durable. It does not tarnish in the air and is often substituted for the more expensive copper.

Asphalt is really mineral pitch. It is compact,

of the nation of the people. In 1901, nearly all
colonial countries have a similar character. In 1901,
the world was in the hands of the United States. The
United States have the most important position of the world.
The influence of the United States is the greatest in the world.
The United States are the only country have the
power to control the world.

Michael Jones and the other men are very kind.
It is a very good thing. It is a very good thing.
The United States are the only country have the
power to control the world.

The United States are the only country have the
power to control the world. The United States are the
only country have the power to control the world.

In 1901, the United States were considered a very
powerful country. It is a very good thing. It is
a very good thing. The United States are the only
country have the power to control the world.

The United States are the only country have the
power to control the world. It is a very good thing.

glossy and brittle. It breaks easily and is easily melted. There is a great lake of asphaltum in Trinidad, South America. It is produced artificially in the making of coal gas.

Mica is found in many kinds of rocks. It consists of thin layers on scales -- having a luster like a mineral. India yields a large amount of very fine quality mica.

Shellac is a solution of lac and alcohol. The crude lac is deposited on certain trees by insects which draw out the sap. Beds of crude lac are found in many places where the lac has been left by the decay of leaves and twigs on which lac had been deposited. Especially good beds of lac are found in India.

Columbus found the redskins playing with rude balls of rubber on the shores of the West Indies. For years, it was entirely an American product. Goodyear spent his life in experiments to vulcanize it. Wickham, an Englishman, transplanted rubber to the East Indies. Native Brazilians spend their lives in the jungles to gather it. They are in constant danger from disease and wild beasts. Hawaiians, Japs, Chinese coolies, Maylas and Filipinos work on oriental rubber plantations.

glance and picture. It shows a scene which is really
faded. There is a great deal of light in the scene,
and the picture is very bright. It is a very good
picture.

There is a lot of light in the scene. It is a
very good picture. It is a very good picture.
It is a very good picture. It is a very good
picture.

There is a lot of light in the scene. It is a
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very good picture. It is a very good picture.

Various kinds of vehicles, transport this rubber to Akron, Ohio, the world's great rubber city. Here, workers of many nationalities, as we said in our study of rubber in a previous chapter, convert the crude rubber into the commercial rubber which finds its way into the telephone. Again, stop for a minute to contrast the life of those Brazilian natives with the life of the Akron rubber workers in a clean, modern family. Remember! They also serve!

Most of our materials already mentioned have been minerals. Next we come to the animal products; wool from the sheep and silk from the worm. Wool from cool countries and silk from warm lands. Much of our wool comes from our western states and from Australia. Silk comes from Japan, China, Italy and France. In both cases, the raw product has to be cleaned and spun in order to make thread; then woven for textiles.

Cotton is a third textile used the world over but grown only in warm countries. Our southern states produce the bulk of the world's cotton. Egypt is noted for its long fibre cotton. Cotton, like linen, is a vegetable product.

Fine linen has always been an evidence of riches

and refinement. Of all fabrics, it has the best wearing qualities. The Egyptians used it, kings wore it, the best draftsmen use it for maps, housewives cherish it and pass it on as a legacy. The telephone makers must have the best, so go to Ireland and Belgium for their linen paper.

Thus you see the vegetable, animal and mineral kingdoms give bountifully of their products to make this telephone. Truly, we live in a wonderful world!

After the class had learned whence all the materials came, they found how and where they were used in two hundred one parts which make up a telephone instrument. They soon realized the wisdom of the poets, "Each thing in its place is best" as they saw how these fibres, minerals and other materials were combined and utilized to make the perfect telephone instrument of today.

Because all the world helps make the telephone, it is but right that the telephone become a public servant. Day and night, it is at your service. News of birth and death, sickness and sorrow, joy and gladness, love and business all go forth by telephone. Newspaper reporters, stock brokers, forest rangers, doctors, policemen, business men and the general public depend on the telephone more than we realize. We take its service for granted because we pay

for it. Some things cannot be paid for by money.

In a small town nearby, a woman all alone in a house was taken suddenly very ill. She took down the telephone and tried to call the doctor, but could do no more. The telephone operator, realizing that something was wrong, looked up the nearest neighbor who had a telephone, called her and told her to go across the street to see if Mrs. Smith needed attention. The good neighbor found Mrs. Smith unconscious and quickly summoned the doctor and the family by telephone. No money could pay that telephone operator for her kindly, human service. When thanked, she said,- "It is all in my day's work. We are here to render service". Surely that was a neighborly spirit.

In every flood, fire or disaster of modern times, we hear stories of the heroism and devotion to duty of the telephone operators. Lives and property are saved by their timely warnings. Linemen are always on duty to watch the telephone wires. During and after storms, gangs of men often work for long stretches without food or sleep in order to keep the telephone service open for us. In the business offices of the telephone company, highly trained men are always striving to extend and improve the use of the telephone.

Any invention, like the telephone, that unites

the 10. The first of these was the 10th of June.

In a small room, a woman all alone in

a house and taken suddenly very ill. The next day the

telephone and tried to call the doctor, but could do so

not. The telephone operator, realizing that something

was wrong, looked up the nearest neighbor who had a telephone.

Called her and told her to go across the street to see if

the woman had been seen. The good neighbor found the

woman unconscious and called the doctor and the

family by telephone. The doctor found her in a

condition for her death. The next day, the

doctor, it is all in the world. The next day to London

arrived. The first time was a telephone call.

In a small room, a woman all alone in

a house and taken suddenly very ill. The next day the

telephone and tried to call the doctor, but could do so

not. The telephone operator, realizing that something

was wrong, looked up the nearest neighbor who had a telephone.

Called her and told her to go across the street to see if

the woman had been seen. The good neighbor found the

woman unconscious and called the doctor and the

family by telephone. The doctor found her in a

condition for her death. The next day, the

doctor, it is all in the world. The next day to London

people, makes for progress and good-will.

We tried to show our pupils that life today in America is very complex. All people need the labor, the brains, the cööperation and the good-will of all other people. We have taken the telephone as a splendid example of a public utility that draws materials and labor from every corner of the globe and in return radiates service to all people everywhere.

We tried to lead them to see that we are all neighbors, not in a narrow, next-door sense, but in the wide world sense. We do not teach any form of religion in our public schools, but we should teach right living, right thinking and right feeling. Every bit of English, geography and history that helps to carry the message of neighborliness from the school to the home is building for better feeling, and, therefore, for better living together in this, our American democracy of 1930. That, we believe, is real character training with stress on tolerance.

NEIGHBORS

"Love thy neighbor as thyself,"
Rings through ages of power and pelf.
From the Mount through ages past,
Down all days while earth shall last.

people, known for their love of freedom.

We tried to show our people that life today
in America is very different. All people want the same
the better, the education and the well-being of all
people. We have taken the telephone as a symbol of this
of a public utility that serves everyone and is not
every corner of the globe and it is not a luxury
to all people everywhere.

We tried to show that in our time we are all
neighbors, not just across the water, but in the
whole world. We do not care what color or religion
is our people's skin, but we do care about their living
right thinking and right feeling. Every man, woman
and child has a right to a better life. The message of
peace and freedom that we have to give is the message of
peace and freedom from the world to the world. For
peace, freedom, and brotherhood, for better living together
in this, our American democracy of 1945. That, we believe,
is the message that we should give to the world.

THE MESSAGE

"Love thy neighbor as thyself,"
through the eyes of peace and love.
That the world should know
that all men are brothers.

What matter the color of soldier brave?
The men who honor and country save,
Who but an ingrate asks the creed
Of man who has done a glorious deed?

When started all this bigotrous notion
That has rolled up like waves on the ocean?
Back in dark ages when man fought his neighbor
And only for paltry self did labor.

Will ever the world be free of war?
Not by any man-made law.
Not while race and color and creed
Stand twixt man and his honest meed!

This of all, is the land of the free!
Land of promise over the sea!
If those promises are to come true,
It's up to me and it's up to you.

Can we forget so soon those truths
Written in blood by World War youths?
Jew and Gentile in No Man's Land,
Priest and Rabbi hand in hand?

Red Cross and Elks and K. of C.,
Angels of Mercy, veritably,

What nation the color of his skin?
The man and woman and country name,
The first in history were the great
Of men who had done a thing or two?

When started all this glorious nation
That has rolled up like water on the shore,
With in each eye was born his nation,
And only for the sake of the world.

All over the world he lived for good,
But by the sea-side lay,
Not with a sea and light and warm
Stand with him and his people stand!

This of all, the land of the free,
Land of peace and love and joy,
If there were a man in the world,
It's no more to be up to you.

Can we forget the men whose spirit
Lived in each of us for good and true?
The one gentle to the world's end,
The one who lived in each of us.

And those who lived in each of us,
The one who lived in each of us.

Forgotten was color, line and race
As they stood ready their God to face.

From the Mount through ages past,
Down all days while earth shall last,
Rings through ages of power and pelf --
"Love thy neighbor as thyself".

SUMMARY

Character training must be an every hour of every day task, not a haphazard one, if it is to be of the greatest possible value. It should not be incidental (or accidental) but should be a well organized vitally motivated part of the school system.

We found that we could stress character training through literature, through history, through economic geography, and through current events. Each of these studies was made more vital by such teaching and in turn, greatly aided our work in character training.

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CHAPTER VIII.

EXTRA AND INTRA CURRICULUM ACTIVITIES CLOSELY CORRELATED

Our junior high schools now have many intra and extra curriculum activities. Most of these are of value and all can be correlated with the regular curriculum.

All kinds of athletics can be correlated with health studies and with character training. In all games, we stress the ideas of doing one's best and of fair play.

A certain first aid club had lessons from the school nurse and the doctor in bandaging, in improvising splints, in syringing ears, in removing splinters, in taking cinders from eyes and in carrying a wounded person. This was hygiene and civics as well.

A dramatic club correlated with English by writing plays, with history in dramatising historic events and with voice culture in training voices for public speaking.

A current events club correlated with art, history, geography and citizenship in its discussions of all important events of the day.

THEORY

THEORY OF THE THEORY OF THE THEORY

The first step in the theory of the theory of the theory is to establish the basic concepts and principles. These are the concepts and principles of the theory of the theory of the theory.

All forms of knowledge are related to each other in a certain way. This is the basic principle of the theory of the theory of the theory.

A certain form of knowledge is related to each other in a certain way. This is the basic principle of the theory of the theory of the theory.

A certain form of knowledge is related to each other in a certain way. This is the basic principle of the theory of the theory of the theory.

A certain form of knowledge is related to each other in a certain way. This is the basic principle of the theory of the theory of the theory.

A home-making club included hygiene, sanitation, etiquette, home nursing, interior decorating, diets, and entertaining in its many activities. These children learned to use the telephone for business and for social calls, as well as for an emergency. They learned how to fill and place hot water bags and ice bags, how to bathe cuts and bruises as well as how to make beds. They learned how to plan for and how to carry out the details of a home party, how to prepare a tray for an invalid, and how to make pretty and useful articles for the home with needle and paint brush.

The science club included physics, hygiene, chemistry and botany among its correlated studies.

The music club did splendid civic work by its community "sings" and its folk songs as well as folk dances. Geography, history and sewing were correlated with the folk dancing, as little costumes, typical of each country, were made for the simple dances.

There is nothing new in all this; it has always been done, but like so many phases of education, it has a new name. It all comes from the age old urge to play. And boys and girls should play. "All work and no play makes Jack a dull boy." It is equally true for Jill. The history of education shows us that clubs dominated by students are not new - for Athens knew them, as also did the European universities of the Middle Ages. Like the junior high schools and

A home-making club included hygiene, sanitation,

cooking, home nursing, interior decoration, etc., and

enterprising in its many activities. These children learned

to use the telephone for business and for social calls, as

well as for an emergency. They learned how to fill and finish

hot water bottles and ice bags, how to change linen and washes as

well as how to make beds. They learned how to plan for and

how to carry out the details of a home party, how to prepare

a party for an occasion, and how to make pretty and useful

articles for the home with needle and paint brush.

The science club included physics, hygiene, chemistry

and botany among its correlated studies.

The music club also included study with its cor-

relative "eloquence" and the folk songs as well as folk dances.

Geography, history and civics were correlated with the folk

handbook, as little children, typical of each nation, were made

for the right hand.

There is nothing new in all this; it has always

been so, but like so many phases of education, it has a new

name. It all comes from the new way of doing things. And now

and this should give "All work and no play makes Jack a

dull boy." It is equally true for girls. The mastery of

education means to the child a kind of freedom and not

now - for women know that, as also do the children and

studies of the Middle Ages. Like the father with sword and

like the shops, the clubs are here to stay; therefore, let us make the most of them.

They must be guided, they may even need a little inspiration in order that they may function for the highest good.

We should not allow the pendulum to swing, as it seems to have done in some cities, so that the regular curriculum is subordinated to clubs. No! Each has its place and both work together. Like all other things in the educational field, clubs must stand the acid test of common sense if they are to be of value. Their greatest value, probably, is their social contribution, and, in many instances, an extra-curricula activity has helped some pupil to make a social adjustment where the other phases of school life have seemed to fail.

This club work brings forth another argument for making the school buildings centers for social and community gatherings. Why not? The public pays for them.

Some claim that these clubs distract the pupils' minds from their studies. Again, we must not go to extremes. We must use sense and good judgment; then we may safely say that the clubs help school work and keep our boys and girls

like the shop, the class was held in the
us make the most of them.

They must be guided, they may even need a little
inspiration in order that they may function for the highest
good.

We should not allow the foundation to sink, as it
seems to have done in some circles, as that the English con-
struction is not intended to stand. But French has the power
and holds them together. While all other things in the school
stand fixed, there must stand the solid base of common sense
if they are to be of value. Their greatest value, probably,
is their social construction, and in many instances, an
extra-curricular activity has helped them to make a
social adjustment where the other phases of school life have
failed to fail.

This does not mean a total adjustment of the
school building, but a social adjustment
of the building. The social side for them.

Some think that these other things are being
done from their studies. Again, we must not go to extremes.
We must not ignore the social side; then we may help to
that the whole school work and help our boys and girls

so actively and healthily occupied that they will not have time or inclination for the anti-social, unclean, undemocratic acts of adolescents which have been causing such concern everywhere to thinking people.

If we keep in mind the real purpose of these extra curriculum activities, we will see to it that they do correlate with the intra-curriculum branches; for instance, an art club planned designs for class pins, traced the history of the pictorial expression of ideas and drew plans for furniture needed for the drawing room, in order that the manual training class might have working drawings. A health club planned meals, constructed a ventilation box to illustrate the principals of ventilation necessary in all rooms, had an O.K. Teeth Party, and instigated an "Avoid Accident" campaign.

A French club put on a little French play for the school's entertainment; corresponded with French children, thereby gaining an insight into the customs and traditions of another country; sang French songs and studied the main facts of French history.

These club activities have a most broadening effect on the pupils, and how we all need that! Everything that tends to broaden their interests should be encouraged. They have an educational value and a social value that can hardly be estimated.

an actively and positively engaged that they will not only
live or participate in the anti-social, economic, and
social movements which have been making their progress every-
where in this country.

It is hard to find the right words to express the
entire situation, but we will say it is that they are not
with the long-suffering process; for instance, an anti-club
planned design for these years, to see the history of the
political expression of these and other things in the
needed for the direct work, in fact, that the nation's training
class might have serious training. A really high planned
goal, connected with the political and social situation of
principles of ventilation necessary in all cases, but not
to be left, and therefore in "social resistance" (social).

A French club got in a little more than for the
general's endorsement; correspondence with French soldiers,
and they are in the light of the situation and conditions of
another country; and French clubs and clubs, the only form
of French history.

These clubs are not a good historical effect
on the people, and we will say that they are not
to be seen in the future, and in the future, they have an
educational value and a social value that can hardly be
estimated.

Let us give them our hearty support and so direct them that their latent possibilities shall not remain latent, but shall function to the full and so become a power in our junior high school organization.

SUMMARY

Clubs, like shops, are here to stay. The history of education proves that, while neither are new, they have become much more universally recognized and used in our schools in the past two decades.

Surely, everything that tends to enrich the lives of the pupils, whether it be to prepare them for profitable use of leisure time, for worthy home membership, for skill in the arts, for health or for wider culture is very valuable and very wholesome. So long as our clubs function in this manner, let us have more of them.

Let us give them our hearty support and co-
operation. Their latent possibilities shall not remain latent,
but shall function to the full and so become a power in our
junior high school organization.

Summary

First, five steps are here to follow. The plan
of education grows first, with neither the how, but how
persons who are naturally talented and used in our schools
in the past few decades.

Second, everything that comes to which the lives
of the people, whether it be to prepare them for political
use of future time, for setting aside controversy, for still
in the end, for health or for other matters - very valuable
and very important. So long as our class function in this
manner, let us have more of them.

CHAPTER IX.

CORRELATION OF SCHOOL AND OUTSIDE INTERESTS.

It seems scarcely necessary to write a chapter on correlation with the outside world because contacts with the outside world have permeated nearly all our previous chapters. Surely, the telephone project was an example of such correlation, as well as the rubber unit, and too, the biographies of great men. It seems to be just one more proof that civics, geography, history and all school work are naturally associated with the outside world and only years of false ideas of education have seemed to separate them.

Throughout our work, we try to keep in mind the fact that we are duty bound to attempt to make good citizens out of our boys and girls. (20) "People have to learn to live together; to share in each other's purposes and problems, to be leaders at times and at other times to subordinate themselves to others in the pursuit of a common purpose."

We often call these contacts with the outside world "civics" for want of a better word. It is that, and it is more; it is the business of living. Very, very little of life

(20) Bonser - The Elementary School Curriculum, p. 418.

THEORY OF THE EARTH AND ITS HISTORY.

It seems extremely necessary to write a chapter on
 correlation with the earth's history because of the
 outside world have been so long in the past.
 Surely, the present world is a result of the past.
 Also, as well as the present world, the past world
 of the past. It seems to be just the same as the
 present world. The world is a result of the past.
 Also, the outside world is a result of the past.
 Also, the outside world is a result of the past.

Through the world, we are to keep in mind the fact
 that we are to keep in mind the fact that the world
 our boys and girls. The world is a result of the past.
 to show in each other's lives and to show in each
 at times and at other times in the world. The world
 exists in the world of a single moment.

We often find that the world is a result of the past.
 "The world is a result of the past." It is true, and it is
 that it is the result of the past. The world is a result of the past.

is within the four walls of a school room and no man or woman is fit to train our young people unless he or she has much, much more to his or her life than that which is encompassed in that small space.

Because, in the past, so many teachers have been partial recluses, the public began to look upon them almost as a class apart from the practical everyday world. There is no one who needs to be a vital part of the world than a teacher. We live in a democracy. We should train our pupils to go forth and to do their share in it, not to shirk - not to monopolize - not to submerge themselves. They have duties as well as rights and they must perform those duties. This is the time to impress that on their plastic minds. Let us not breed snobs or shirkers.

Teachers have a sacred duty there. Pupils will respond, will co-operate, if given a chance. The teacher's part in it is not easy, but we have chosen to teach, so we must carry on.

It is our duty to educate our pupils for intelligent citizenship. That sounds well, but what does it mean? For one thing, it means that we will train our pupils to look into affairs of the day instead of swallowing everything in the newspapers. We can teach them to compare books and magazines

is within the four walls of a school room and by the way
woman is fit to train our young people unless he at the
same time, such work to him as his life time which is
encompassed in that small space.

However, in the past, as some teachers have been
permitted to remain, the public began to look upon them almost
as a class apart from the practical everyday world. There
is no one who needs to be a vital part of the world today
teacher. He lives in a democracy. He speaks with the
people of the world and to the people of the world. He is not
not to monopolize - not to dominate. They have
beliefs as well as rights and they must be heard in our nation.
This is the time to express faith in their present and
not to not break faith in the future.

Teachers have a sacred duty. They will
respond, will co-operate, if given a chance. The teacher's
part is to be heard, but we have chosen to speak, to be
heard every day.

It is our duty to express our faith for the future
clearly. That means well, but what does it mean? For the
thing, to mean that we will fight our battle to look into
affairs of the day instead of withdrawing everything in the
background. To our work both in our present and in the future.

in order to get different opinions and to weigh them carefully.

We can teach them not to be swayed by flights of oratory or by glib blanket terms. We can teach them to see both sides, for, regardless of such terms as the autocracy of wealth and mob rule, the fact is patent that both sides to the controversy have sinned against society. The better statements and better policies of both sides should be accepted at full value and their good intentions capitalized. This might be called vocational guidance but, we will not quibble over terms. Certainly, it all helps in our correlated work.

The spread of education is sure to be accompanied by certain forms of discontent among the workers, so, lest such workers become dangerous citizens, we must see that this discontent becomes constructive and helpful to society. Whether or not we outline these problems of the day to the children in school, the brighter ones among them will later study and read on their own account and will become intelligent in the solutions attempted if we have trained them to think as they read and to weigh the evidence. Those not so bright, will, if we have trained them well, also listen, read and weigh, even if more slowly, and, even if incapable of offering solutions to current problems, will have sufficient intelligence

in the year of 1911, the first of the series.

1911.

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to accept the best solutions.

Democracy means more than the right to vote. It means securing ample opportunity for all and protection for all. Without economic, social and civic knowledge of a protective sort, the individual in this work-a-day world is helpless. The schools must give the pupils this knowledge and aid them to go forth equipped for living in a democracy. We claim, not that the world owes each man a living, but that the world should yield each man a foothold, an opportunity to work and to advance, and, in teaching our civics, we should stress the duty of each man to make the most of his opportunity, not only for himself, but for the group, speaking sociologically.

We must lead children to consider these points if we are educating them for life in a democracy. Future citizens must be taught that mere submission to an established order of any kind means individual atrophy and social stagnation, while mere strife is no more efficacious than would be running against a wall; but that intelligent and constructive adjustment and co-operation is the best policy.

If, with Mary McDowell, we say, "Civics is a matter of human welfare," we have no narrow connotation but a most inclusive definition. We will teach our children the laws of health and sanitation and keep them ourselves. We will teach

Democracy means more than the right to vote.

It means securing equal opportunity for all and protection for

all. It means economic, social and civil equality of all.

Progressive men, the fundamental in this world, would

believe. The schools must give the pupils this knowledge.

It is then to the first step in living in a democracy.

We must, but the world is not a living, it is a

dead world. It is a dead world, an opportunity for

work and to advance, and, in teaching and living, we must

stress the duty of each man to make the best of his opportunity.

Not only for himself, but for the group, physical, social, economic.

We must teach children to make the best of their

life in a democracy. We must stress

the duty of each man to make the best of his opportunity.

Not only for himself, but for the group, physical, social, economic.

We must stress the duty of each man to make the best of his opportunity.

Not only for himself, but for the group, physical, social, economic.

We must stress the duty of each man to make the best of his opportunity.

It is then to the first step in living in a democracy.

We must, but the world is not a living, it is a

dead world. It is a dead world, an opportunity for

work and to advance, and, in teaching and living, we must

boys and girls not to spit on the sidewalk and not to break quarantine because, thereby, they endanger the health of others.

We will teach them to respect other people's property both individual and public. There is a great deal to be done along this line. It may well begin with respect for school property, owned by the tax-payers.

We will teach them, in voting for class officers, to think of the fitness of the pupil for the position and to recall his record of trustworthiness; not to be swayed by good clothes or athletic prowess.

If we do these things, we may be building better than we know. Such lessons do carry over into their outside lives. We have evidence of it.

We will teach them loyalty to all that is best in our country, rather than a critical attitude. We have certainly become surfeited with publications that condemn America and Americans ad libitum. Who does it? Many times it is the third generation Americans" who seem to feel that they established their own superiority and distract attention from their humble origins. There is something about that procedure that rings false. Let us lead our pupils away from any such paths.

and this is not the case. The fact is that the
question of the future of the world is not a
question of the future of the world.

We will have to wait to see what the
future has in store for us. There is a great
deal of work to be done. It is not only
the work of the future, but the work of the
present.

We will have to wait to see what the
future has in store for us. There is a great
deal of work to be done. It is not only
the work of the future, but the work of the
present.

It is not only the work of the future,
but the work of the present. We have to
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present.

We will have to wait to see what the
future has in store for us. There is a great
deal of work to be done. It is not only
the work of the future, but the work of the
present.

Again, some of the critics are the uneducated foreigners who are not finding the hoped-for "gold in the streets" so, becoming embittered, grumble about everything here, even though it is better than anything they ever had before. Let us so train our foreign children that they become loyal citizens instead of misfits.

Then there is that group of scandal-mongers who delight in unearthing any blot on the pages of our history or any indiscretion in the private life of any of our patriots. That group is destructive, wholly; no good can be gained from those front page exposés. We can, however, train our pupils to read, weigh, and discount those sensational items.

It is true that we have crime waves, that we have some low-grade racial stock, and that we have not an ancient culture. Other countries have the two former; it is not our curse, alone. Our youth, as a nation, prevents our having ancient culture, but we can, and do, benefit by as much of that culture as is suitable here.

It must be evident to any real thinker that our national energy had to be spent in conquering the elements and in directing the natural forces in this vast, new country. Who has a right to scorn such a gigantic work? No one! Let

which some of the writers are the most

foreigners and are not finding the same field in

the streets of the American continent, perhaps about every

thing here, even though it is better than anything they ever

had before. For us to begin the foreign collection they

found it very difficult to collect.

There is a large group of people who are

delight in collecting and who are not afraid of the

or any indication in the public life of any of our

history. That group is the majority, really; the group who

he found from those from the past, the past, however,

with our people to read, write, and discuss these con-

ditions.

It is true that we have a great number of people

some of these people are, and that we have had an excellent

culture. Other countries have the same thing; it is not

the same, but the same, as a matter of fact, it is not

having ancient culture, but we have, and we have it in

such of that culture as is available.

It must be evident to any one who knows that we

national energy and to be able to understand the elements

and in different the world's history in this year, now country.

There has a right to know such a scientific work, to read and

us impress these truths on our boys and girls. That is all good preparation for their future lives.

The poets, artists, musicians and authors depend, for their very sustenance, on those who fell trees, clear tracts of land, produce huge crops of grains, construct railroads and delve into the earth for ores. We need both groups. Neither should decry the efforts of the other, nor the results of those efforts. So much has been said in previous chapters about emphasizing inter-dependence that it need not be dwelt on here.

Is it not a majestic undertaking to have made, in a short span of years, a world power out of a wilderness? Who dares criticize emigrants or immigrants indiscriminately? Certainly, no one pretending to have good civic intelligence would do so. Those adventuresome Virginians and God-fearing New Englanders blazed a trail that persecuted people of all lands have followed. The Irish of forty-nine, the Germans of a few years later, the Scandinavians of later years, and the Italians of the past two decades deserve much credit also. Let us impress that on our children. Those people had the spirit of pioneers. Those hardy folks who first crossed the Appalachians and braved the Indians must have a full share of our admiration. Neither can we overlook the French Canadians and Poles in our big mill cities. They are as truly

pioneers on the industrial frontier as were any of the others on the geographical frontier. They have all contributed to the United States of America.

No one really scorns wealth or comfort that is honestly acquired and rightly used. Some persons affect a hypocritical scorn of them, but the same individuals are usually endeavoring (less successfully) to attain those very things. Let us teach our pupils to be true, to scorn hypocrisy, and to face the facts of life as they are.

Well may we rejoice in our national wealth, and give praise where it is due that we working people enjoy more comfort than human beings in any other era of world history or any other nation of the world today.

There can be little time or spirit left for art, literature or music when every atom of energy is required for sustaining a mere existence. Therefore, our prosperity is now giving us an opportunity to enjoy those finer things of life. There is no doubt that the great majority of our people are so using this earned opportunity.

America is producing some superb painters, marvelous scientists, and inventors, eminent psychologists and the best surgeons and dentists in the world.

place on the industrial frontier we were not of the
where on the geographical frontier. They have all con-
tributed to the United States of America.

It is one thing to say that we are not of the
industrial frontier and it is quite another to say that we
are not of the geographical frontier. For the same individuals are
usually concentrated (and concentrated) in certain places
very things. Let us turn our backs to the past, to the
hypocrisy, and to the fact of life as they are.

Well now we return to our national frontier, and
give notice that it is not the same as the geographical
frontier. There is no such thing as a national frontier
history or any other nation of the world today.

There can be no such thing as a national frontier, and
therefore no such thing as a national frontier. It is
for realizing a more existence. Therefore, and it is
is now giving us an opportunity to realize these things
in life. There is no doubt that the great majority of our
people are so using this national opportunity.

America is producing more goods than it can
sell, and it is producing more goods than it can
sell. The best of the world is the world.

No other large nation has ever displayed such a capacity for self-government and saneness in public affairs (despite the allegations of carping critics). We can well be proud of our schools, our hospitals, and our organized charities. Let us just steep our children in all these facts and so develop a real loyalty to all that is best in our country.

We have made a great nation out of a raw country; we have given health, education, and a decent living to the masses; and have created a virile, New World, art literature and science. Best of all, we see far more ahead if we but train our boys and girls aright, and, so, with Miss Bates, we sing:

"America! America! God mend thine every flaw,
Confirm thy soul in self-control,
Thy liberty in law."

I repeat that, in every unit of work mentioned in previous chapters, we have made many contacts with the outside world and so correlated our school work with the work of the outside world. Our health work, our Red Cross work and our vocational guidance have all correlated inside and outside interests.

This business of living together and working together harmoniously is our biggest problem today. We

So other large parties have been displayed since a

especially the anti-Communism and socialism in public affairs
[the big the situation of military crisis]. So now will
be part of our activity, and perhaps, and our experience
should be that we have shown an enthusiasm in all these
books and we are doing a good job in all that is done in
our country.

We have made a great deal of work in a few days;
we have given people, especially, and a general living in
the country; and have created a feeling for the people, and
literature and science. But it is, we are not sure about
it we are sure our work and our life is, and we will
live better, we will;

"America, America, the land that we love,
Land of the free, in self-control,
The liberty in the."

I repeat that, in every part of our country is
presently operating, we have been very successful with the out-
side world and we are working our school work with the work
of the outside world. Our health work, our and these work
and our vocational education have all been successful inside and
outside the country.

This booklets of living together and working
together is a very important work in our life.

need to stress co-operation, whether it be in a family, in school or in a community, we need to teach the youth of today to give and take, to sacrifice their own comfort or pleasure part of the time in order to give the other fellow a chance.

One group of school children demonstrated their willingness to give the other fellow a chance through a Floating Hospital project.

One pupil reported a newspaper appeal to the class. "Give the kiddies a chance!" "Go without a cigar, a movie, or an ice cream cone and save a sick baby's life" were the printed captions.

We talked over the matter in current events period and thereby brought in a great deal of hygiene. The need for fresh air, sunshine, good milk and green vegetables in order to be healthy was stressed; also the fact that sick people could be cured by these very things often times.

Immediately from their big hearts came the response: "We are well. We will help the sick babies." Of course, committees, many committees had to be formed. Our good people of the community rallied to our support, as usual. From many sources came that every ready and always welcome, "What do you want me to do?" or "Count on me" from this man and that, this woman and that.

need to stress co-operation, whether it be in a family,
in school or in a community, we need to teach the youth
of today to give and take, to contribute their own talents
on pleasure part of the side in order to give and receive
fairly a chance.

One group of school children demonstrated their
willingness to give the other half a chance through a
flowering hospital project.

The girls reported a newspaper appeal to the class.
"Give the children a chance!" "We without a sign, a party,
or an ice cream cone and have a little party with the
flowering hospital."

It is noted that the nation is during every period
and thereby brought in a great deal of pleasure. The need
for fresh air, sunshine, good food and green vegetation is
order to be healthy and happy; with the fact that rich
people could be helped by these very things often times.

Immediately from their big hearts came the response:
"We are well. We will help the sick babies." Of course,
sometimes, many difficulties had to be solved. Our good
people of the community rallied to our support, we said.
Then many people came that every week and always welcome,
"What do you want me to do?" or "Count on me from this and
that time, this woman and that."

We counted on them, I assure you, and we found something for each willing friend to do.

The children decided to write a play and present it. It could be just a little play as our time was short. It really was a dear little play showing a poor sickly baby (doll) in squalid surroundings; a visiting nurse offering to take it on the floating hospital; and the same baby returned at the end of the summer rosy and healthy to a tenement scrupulously clean. The mother, relieved of the care of the baby, gathered strength to do her household duties properly.

We had some flower drills and miscellaneous numbers to fill out the program. Since we have described other plays in other units of work, we will take up the other features of this project rather than dwell on the play.

The children copied and also originated "Sick Baby" posters that would make anybody, whose heart was not of stone, sympathetic enough to buy a ticket. These posters were put in all public places.

Tickets, nice little tickets, too, were printed by the children. Programs were printed, a hall negotiated for (free of charge), ushers chosen, ticket seller elected, refreshments ordered and many more details attended to.

We counted on them. I assure you, and we found

something for each willing to do.

The committee decided to write a play and present it.

It could be just a little play as you said. It

could be a little play about a poor little girl

(doll) in a little room, a little house, a little

as she is on the little street; and she was

returned at the end of the street, and she was

returned at the end of the street, and she was

returned at the end of the street, and she was

returned at the end of the street.

We had been to see the little girl and her mother

at the end of the street. Since we have

played in other parts of the street, we will

return to this street to see the little girl.

The committee decided to write a play and present it.

It could be just a little play as you said. It

could be a little play about a poor little girl

(doll) in a little room, a little house, a little

as she is on the little street; and she was

returned at the end of the street, and she was

returned at the end of the street, and she was

returned at the end of the street, and she was

Meanwhile, a lively correspondence was carried on with the Floating Hospital Committee and with the health authorities.

The financial transactions here were well worth while. Money was counted and recounted, bills paid, money taken to the bank, checks made out, receipts acknowledged and other business affairs attended to in a businesslike manner.

Needless to say, their small subscription of money to the Floating Hospital was most gratefully received. Their large contribution of love and good-will was greatly appreciated, too. And, to show that "large oaks from little acorns grow" and to show that our work did carry over, we are glad to relate that people in that community who never thought of such a thing before, have sent a sizable contribution to that cause every year since. We believe that we made a success of that attempt to correlate school activities with the outside world.

SUMMARY

If we believe that education is living as well as preparation for adult life, then we can not confine it within

the school room walls; it must reach out into the world about us. School and book learning is only one part of a person's education and, alone, would be a very narrow part.

Any man or woman who has taught in our schools must realize that the public is interested in our work; in fact to the average parent, the childrens' schools are all important. If we give the ~~community~~ a chance, it is very willing to help us with time, or money or services.

We have found that correlating our school interests with those of the community has gone far in vitalizing our civics work and in creating a general spirit of helpfulness of children toward grown-up and of adults toward the children. We feel that it has helped greatly in making each to realize and to accept his responsibilities which, we are told is one of America's greatest needs today.

CHAPTER X.

SUMMARY

Since one knows more and writes better the things one has actually done than of theoretical events, we have used as instances to develop our points in regard to correlation, the work done by the classes in our own school.

We believe that working and learning and playing are all necessary parts of each child's and each adult's life; that they are all closely correlated and that the lack of any one of the three parts makes unbalanced and incomplete individuals, people not living up to their best possibilities and not giving their best to the world.

Since our duty is to train our youth to live up to their highest possibilities, it is patent that we must train them for work, for play and for study. As these three great parts of life flow together and merge into a whole, so should the various branches of school work flux together. The more closely and vitally they are connected, the greater their value to the pupil.

Let us join work and thought, action and theory, practice and ethics. Let us follow the child's way of life and learn from contact with all the forces about us. Let us

THE CHILD

Since we know more and know better the things

and has actually done much of the work of the world, we have
 and as it is necessary to develop our ability in regard to con-
 relation, the work done by the child in our own school.

We believe that working and learning and playing

are all necessary parts of each child's life and adult's
 life; that they are all closely connected and that the lack
 of any one of the three parts makes the child and the adult
 individually, people not living up to their best possibilities
 and are giving their best to the world.

THE CHILD

Since our duty is to train our child to live up to
 their highest possibilities, it is evident that we must train
 them for work, for play and for study. In these three great
 parts of life they grow together and merge into a whole, so should
 the various branches of study and life together. The more
 deeply and wisely they are connected, the greater their
 value to the world.

Let us join work and thought, action and theory,
 practice and science. Let us follow the child's way of life
 and learn from nature and all the forces about us. Let us

allow the child to learn this way, his way, the right way. Let us educate all the children of all the people in all possible ways.

We must be whdesomely sane about it and not make the mistake of trying to correlate things which are unrelated. That will defeat our purpose. Common sense must be our guide.

The social sciences really fuse very readily with each other and with other subjects. These studies emphasize man as a social being, a member of organized society. Whether or not he conforms and lives in harmony with other members of the group depends much on the training that we give him. Therefore, we stress the social sciences and use them as avenues of approach which send tendrils of interest into all the other branches of the *intermediate* school curriculum.

Geography is a fine stimulus for motivation and correlation because it is the story of the earth as the home of man. We have tried to show some practical ways to so use geography.

Shop activities furnish ever present and ever changing materials for correlating hand work with academic work. The problem of how to link shop and school room work has perplexed teachers in the past, but now that problem has been solved and one part inspires the other until we have a perfect

Let us educate all the children of all the people in all possible ways.

We must be wisely chosen about it and not make the mistake of trying to concentrate things which are unrelated. That will defeat our purpose. Common sense must be our guide.

The social sciences really have very little to do with each other and with other subjects. These subjects emphasize them as a whole, but as a part of organized society. Whether or not we continue and live in harmony with other people of the group depends much on the training that we give them. Therefore, we stress the social sciences and use them as a basis of approach with some knowledge of interest into all the other branches of the university's school curriculum.

Geography is a field which has revolutionized and revolution because it is the study of the earth on the basis of fact. We have tried to show some practical ways to use

They activities furnish ever present and ever changing materials for correlating them with academic work. The problem of how to link them and school work and the physical sciences in the past, but now that problem has been solved and the past inspired the spirit until we have a perfect

circle of correlation: Every shop abounds with suggestive motivation for the three R's and the other academic branches.

Vocational guidance has become a vital part of the organized course of study today. This is a work-a-day world, in which each person should do his part; therefore we teachers should guide these pupils wisely in a choice of life work. It should not be left until senior high school, but should be an omnipresent topic of interest during junior high school days. The best preparation along these lines is a wide choice of try-out courses, each of which furnishes a wealth of correlated material.

Health study is, indeed, important as a main branch and also for complementing and supplementing all the other school work. The statistics compiled at the time of the World War were most alarming in regard to the health of our youth. Somehow, we have not paid due attention to health study. In the past, we taught physiology, not hygiene and then relied on the out of door play to develop muscles and to take care of proper breathing and digestion. Life has so changed from the natural to the artificial that we can no longer take those things for granted. To begin with, we teach hygiene and health habits. Next we attend to heating and ventilation and lastly have preventive gymnastics. All through the day, we find opportunities to stress the importance of posture, of proper clothing, of good plain food, of fresh

circle of correlation; every day contacts with sympathetic
motivation for the same work and the other students' progress.

Vocational guidance was becoming a vital part of
the organized course of study today. This is a very
world, in which each person should be his best; therefore
we should know what kind of work he is capable of
doing. It should not be left until senior high school,
but should be an integral part of interest during Junior
high school days. The best preparation for this time is
a wide course of study, such as which furnishes a
well-rounded material.

Health study is, indeed, important as a whole program
and also for developing and encouraging the other
school work. The statistics compiled at the time of the
World War were most striking in regard to the number of our
people. However, we have not paid the attention to health
study. In the past, we taught physiology, the system and
then relied on the old of good food, exercise, and sleep
to take care of present problems and diseases. This has so
continued from the material in the curriculum that we can no
longer take these things for granted. To begin with, we
teach hygiene and health habits. Next we learn to prevent
and ventilation and finally have preventive practices. All
through the day, we find opportunities to discuss the importance
of hygiene, of proper clothing, of good habits, of food

air, of vigorous exercise, of cleanliness and of sufficient sleep. May we continue!

Character training is something bigger even than health study or vocational guidance. We may have to answer to the public for the health (good or poor) of our children and for fitting (or not fitting) our boys and girls for their work, but certainly we will have to answer to a Higher Power for our part in the stewardship of the characters of our pupils. Character training can be so developed and so arranged as to be motivated by the course of study and, in turn, to motivate that course. The more we do of that, the deeper will the roots of honesty, fair-play, cleanliness of mind and heart and body, obedience and tolerance grow into their very beings. We can do it; we must do it; in example as well as in precept. We are doing it.

Extra and intra curriculum activities should be selective and should be made to function. They should be correlated with the curriculum and should both motivate it and be motivated by it. Every pupil should be an active member of his club if clubs are to justify their existence. The aim of clubs is primarily a social one, that is, to help show the way for boys and girls to live together. That is in no way separate from the educational aim, as some people seem to think. They are one and the same. Perhaps the two words of counsel to teachers in regard to these activities are: Have a definite aim and guide wisely but not too much.

all of which are exercises, of elimination and of retention

which are exercises

Character training is something which even the
healthiest body in a civilized community. We may have to know
the public for the health (good or bad) of our children
and for fitness (or not fitness) and body and mind for
their work, but certainly we will have to answer to a higher
power, for we are in the responsibility of the character of
our people. Character training can be developed and can
be taught as it is required by the power of education, in
fact, to motivate that character. There are as of now, the
people will the power of knowledge, thought, development of
mind and heart and body, education and character training into
their very being. We can do it; we must do it; in training
we will be in progress. We are doing it.

There are many exercises and activities which are
active and should be made to function. They should be
connected with the individual and make him active in
and be motivated by it. Every body should be an active
part of his life if there are to justify their existence.
The idea of work is primary, a social one, that is, to help
the way for the body and mind to be together. This is
the way to connect them and educational life, and these people
are to be. They are one and the other. Through the
character training in training in order to learn activities
and have a definite idea and understanding of the work.

Since education has become universal instead of, as formerly, limited to the few, it no longer has a monastic aspect but has become part of every person's life; therefore, let us make it a real part. Let us seize every opportunity to connect every lesson, as far as possible, with the child's life. Let us show them that their arithmetic, reading and spelling are all needed outside of school, not just tell them so. Let us welcome all contacts with the community. Let us teach children to work, play, assume responsibility, follow directions, laugh, take correction and advice in school just as normal, well-balanced people do outside in the world.

In short, let us make our schools, as much as possible like life. Then, we must correlate; and will do so quite naturally. We will then allow each child and each subject to preserve its own identity and develop to its best possibility but always in relation to the rest of the children and the rest of the curriculum. Each subject and each child will sometimes lead and sometimes be subordinate, will have its own place and its own rights and will carry its own load. Then, and only then, will we have achieved a measure of democracy in education.

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as formerly, limited to the few, it no longer has a monastic aspect but has become part of every person's life; therefore, let us make it a real part. Let us make every opportunity to connect every lesson, as far as possible, with the child's life. Let us give them their own problems, making them appealing and all needed outside of school, not just tell them so. Let us welcome all contacts with the community. Let us teach children to work, play, assume responsibility, follow directions, handle, take correction and advice in school, just as normal, well-adjusted people do outside in the world.

In short, let us make our schools, as much as possible

like life. Then, we must recognize, and will be so quite naturally. We will then allow each child and each subject to preserve its own identity and develop to its best possible ability and degree in relation to the rest of the children and the rest of the curriculum. Each subject and each child will create its own life and relationships, will have its own place and its own rights and will carry its own load. Then, and only then, will we have achieved a measure of democracy in education.

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